# DDF Reference Guide

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# 1. Application Reference

Installation and configuration details by application.

## 1.1. Admin Application Reference

The Admin Application contains components that are integral for the configuration of DDF applications. It contains various services and interfaces that allow administrators control over their systems and enhances administrative capabilities.

### 1.1.1. Admin Application Prerequisites

None.

### 1.1.2. Installing the Admin Application

Install the Admin application through the Admin Console.

1. Navigate to the **Admin Console**.
2. Select the **System** tab.
3. Select the **Features** tab.
4. Install the `admin-app` feature.

### 1.1.3. Configuring the Admin Application

To configure the Admin Application:

1. Navigate to the Admin Console.
2. Select the **Admin** application.
3. Select the **Configuration** tab.

*Table 1. Admin Available Configurations*

| Name | Property | Description |
|---|---|---|
| Admin UI | org.codice.admin.ui.configuration | Admin UI configurations. |
| Admin Configuration Policy | org.codice.ddf.admin.config.policy.AdminConfigPolicy | Admin Configuration Policy configurations. |

*Table 2. Admin UI*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Enable System Usage message | `systemUsageEnabled` | Boolean | Turns on a system usage message, which is shown when the Admin Application is opened. | false | true |
| System Usage Message Title | `systemUsageTitle` | String | A title for the system usage message when the application is opened. | | true |
| System Usage Message | `systemUsageMessage` | String | A system usage message to be displayed to the user each time the user opens the application. | | true |
| Show System Usage Message once per session | `systemUsageOncePerSession` | Boolean | With this selected,the system usage message is shown once for each browser session. Uncheck this to have the usage message appear every time the admin page is opened or refreshed. | true | true |
| Ignored Installer Applications | `disabledInstallerApps` | String | Comma delimited list (appName, appName2, ...appNameN) of applications that are disabled in the installer. | admin-app,platform-app | null |

*Table 3. Admin Configuration Policy*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Feature and App Permissions | `featurePolicies` | String | When enabled, the desired features or apps are only modifiable and viewable to users with the set attributes. The entry should be the format of: `feature name/app name = "user attribute name=user attribute value"` | | false |
| Configuration Permissions | `servicePolicies` | String | When enabled, the desired service is only modifiable and viewable to users with the set attributes. The entry should be the format of: `configuration ID = "user attribute name=user attribute value"` | null | false |

# 1.2. Catalog Application Reference

The Catalog provides a framework for storing, searching, processing, and transforming information.

Clients typically perform create, read, update, and delete (CRUD) operations against the Catalog.

At the core of the Catalog functionality is the Catalog Framework, which routes all requests and responses through the system, invoking additional processing per the system configuration.

## 1.2.1. Catalog Application Prerequisites

To use the Catalog Application, the following applications/features must be installed:

- Platform

## 1.2.2. Installing the Catalog Application

Install the Catalog application through the Admin Console.

1. Navigate to the **Admin Console**.
2. Select the **System** tab.
3. Select the **Features** tab.
4. Install the `catalog-app` feature.

## 1.2.3. Configuring the Catalog Application

To configure the Catalog Application:

1. Navigate to the Admin Console.
2. Select the **Catalog** application.
3. Select the **Configuration** tab.

*Table 4. Catalog Available Configurations*

| Name | Property | Description |
|---|---|---|
| URL Resource Reader | ddf.catalog.resource.impl.URLResourceReader | URL Resource Reader |
| Catalog Policy Plugin | org.codice.ddf.catalog.security.CatalogPolicy | Catalog Policy Plugin. |
| Video Thumbnail Plugin | org.codice.ddf.catalog.content.plugin.video.VideoThumbnailPlugin | Video Thumbnail Plugin. |

| Name | Property | Description |
|---|---|---|
| Xml Query Transformer | ddf.catalog.transformer.xml.XmlResponseQueueTransformer | Xml Response Query Transformer. |
| Security Audit Plugin | org.codice.ddf.catalog.plugin.security.audit.SecurityAuditPlugin | Security Audit Plugin. |
| Resource Download Settings | Metacard_S3_Storage_Route | Resource Download Configuration. |
| Resource URI Policy Plugin | org.codice.ddf.catalog.security.ResourceUriPolicy | Resource URI Policy Plugin. |
| Metacard Attribute Security Policy Plugin | org.codice.ddf.catalog.security.policy.metacard.MetacardAttributeSecurityPolicyPlugin | Metacard Attribute Security Policy Plugin. |
| Metacard Validation Marker Plugin | ddf.catalog.metacard.validation.MetacardValidityMarkerPlugin | Metacard Validation Marker Plugin. |
| Catalog Federation Strategy | ddf.catalog.federation.impl.CachingFederationStrategy | Catalog Federation Strategy. |
| PDF Input Transformer | ddf.catalog.transformer.input.pdf.PdfInputTransformer | PDF Input Transformer configurations. |
| Historian | ddf.catalog.history.Historian | Enables versioning of both metacards and content. |
| Catalog Metacard Ingest Network Plugin | org.codice.ddf.catalog.plugin.metacard.MetacardIngestNetworkPlugin | Catalog Metacard Ingest Network Plugin. |
| CSW Connected Source | Csw_Connected_Source | CSW Connected Source. |
| Confluence Federated Source | Confluence_Federated_Source | Confluence Federated Source. |
| Schematron Validation Services | ddf.services.schematron.SchematronValidationService | Schematron Validation Services configurations. |
| Metacard Backup File Storage Provider | Metacard_File_Storage_Route | Enable data backup of metacards using a configurable transformer. |
| Catalog Backup Plugin | ddf.catalog.backup.CatalogBackupPlugin | Catalog Backup Plugin configurations. |
| XML Attribute Security Policy Plugin | org.codice.ddf.catalog.security.policy.xml.XmlAttributeSecurityPolicyPlugin | XML Attribute Security Policy Plugin. |
| Catalog Preview | org.codice.ddf.transformer.preview | Allow Preview to be Extracted From Metadata. |

| Name | Property | Description |
|---|---|---|
| Metacard Validation Filter Plugin | ddf.catalog.metacard.validation.MetacardValidityFilterPlugin | Metacard Validation Filter Plugin. |
| Expiration Date Pre-Ingest Plugin | org.codice.ddf.catalog.plugin.expiration.ExpirationDatePlugin | Catalog pre-ingest plugin to set an expiration date on metacards. |
| Catalog Standard Framework | ddf.catalog.CatalogFrameworkImpl | Catalog Standard Framework configurations. |
| Tika Input Transformer | ddf.catalog.transformer.input.tika.TikaInputTransformer | Tika Input Transformer. |
| Catalog OpenSearch Federated Source | OpenSearchSource | Catalog OpenSearch Federated Source. |
| Status Source Poller Runner | org.codice.ddf.catalog.sourcepoller.StatusSourcePollerRunner | Status Source Poller Runner. |
| Content File System Storage Provider | org.codice.ddf.catalog.content.impl.FileSystemStorageProvider | Content File System Storage Provider. |
| Resource Download Settings | ddf.catalog.resource.download.ReliableResourceDownloadManager | Resource Download configurations. |
| Content Directory Monitor | org.codice.ddf.catalog.content.monitor.ContentDirectoryMonitor | Content Directory Monitor configurations. |

*Table 5. URL Resource Reader*

| Name | Property | Type | Description | Default Value |
|---|---|---|---|---|
| Follow Server Redirects | `followRedirects` | Boolean | Check the box if you want the Resource Reader to automatically follow server issued redirects (HTTP Response Code 300 series). | true |
| Root Resource Directories | `rootResourceDirectories` | String | List of root resource directories. A relative path is relative to <DDF_HOME>. Specifies the only directories the URLResourceReader has access to when attempting to download resources linked using file-based URLs. | data/products |

*Table 6. Catalog Policy Plugin*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Create Required Attributes | `createPermissions` | String | Roles/attributes required for the create operations. Example: role=role1,role2 | http://schemas.xmlsoap.org/ws/2005/05/identity/claims/role=guest | true |
| Update Required Attributes | `updatePermissions` | String | Roles/attributes required for the update operation. Example: role=role1,role2 | http://schemas.xmlsoap.org/ws/2005/05/identity/claims/role=guest | true |
| Delete Required Attributes | `deletePermissions` | String | Roles/attributes required for the delete operation. Example: role=role1,role2 | http://schemas.xmlsoap.org/ws/2005/05/identity/claims/role=guest | true |
| Read Required Attributes | `readPermissions` | String | Roles/attributes required for the read operations (query and resource). Example: role=role1,role2 | http://schemas.xmlsoap.org/ws/2005/05/identity/claims/role=guest | true |

*Table 7. Video Thumbnail Plugin*

| Name | Property | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Maximum video file size to process (Megabytes) | `maxFileSizeMB` | Long | Maximum video file size in Megabytes for which to create a thumbnail. Default is 120 Megabytes. Processing large videos may affect system performance. | 120 | false |

*Table 8. Xml Query Transformer*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Parallel Marhsalling Threshold | `threshold` | Integer | Response size threshold above which marshalling is run in parallel | 50 | true |

*Table 9. Security Audit Plugin*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Security attributes to audit | `auditAttributes` | String | List of security attributes to audit when modified | security.access-groups,security.access-individuals | true |

*Table 10. Metacard Backup S3 Storage Provider*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Keep Deleted Metacard | `keepDeletedMetacards` | Boolean | Should backups for deleted metacards be kept or removed. | false | true |
| Metacard Transformer Id | `metacardTransformerId` | String | ID of the metacard transformer to use to serialize metacard for backup. | metacard | true |
| Backup Invalid Metacards | `keepDeletedMetacards` | Boolean | Keep backups for metacards that fail validation with warnings or errors. | true | true |
| Metacard Tags | `backupMetacardTags` | String | Backup only metacards with one of the tags specified. | resource | true |
| S3 Access Key | `s3AccessKey` | String | The access key to use for S3. Leave blank if on an EC2 host with roles assigned. | "" | true |
| S3 Secret Key | `s3SecretKey` | Password | The secret key to use for S3. Leave blank if on an EC2 host with roles assigned. | | true |
| S3 Bucket | `s3Bucket` | String | The S3 Bucket in which to store the backed up metacard data. | | true |
| S3 Endpoint | `s3Endpoint` | String | The endpoint for the region in which the bucket is located. | | true |

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Object Template | `objectTemplate` | String | Template specifying the S3 object key for the metacard data. The template uses handlebars syntax.<br><br>Use [] to reference dotted attributes, as in {{[attribute.name]}}.<br><br>If you wish to include date, you would use {{dateFormat created yyyy-MM-dd}} | data/backup/metacard/{{substring id 0 3}}/{{substring id 3 6}}/{Metacard_S3_Storage_Route}.xml | true |

*Table 11. Resource URI Policy Plugin*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Permit Resource URI on Creation | `createPermissions` | String | Allow users to provide a resource URI when creating a metacard | http://schemas.xmlsoap.org/ws/2005/05/identity/claims/role=guest | true |
| Permit Resource URI on Update | `updatePermissions` | String | Allow users to provide a resource URI when updating a metacard | http://schemas.xmlsoap.org/ws/2005/05/identity/claims/role=guest | true |

*Table 12. Metacard Attribute Security Policy Plugin*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Metacard Intersect Attributes: | `intersectMetacardAttributes` | List of rules | Each line item in the configuration is a rule. The format of a rule is the name of a single source attribute, followed by an equals sign, followed by the destination attribute. For example: source_attribute1=destination_attribute. The plugin gathers the source attributes that have a common destination. It takes the combined values of the source attributes and makes them the values of a (new) metacard attribute, the destination attribute. The strategy for combining the values is intersection, which means only the values common to all source attribute are added to the destination attribute. Note: Do not use the same destination attributes in both the Intersect and Union rule sets. The plugin behaves unpredictably. | none | false |

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Metacard Union Attributes: | `unionMetacardAttributes` | List of rules | Each line item in the configuration is a rule. The format of a rule is the name of a single source attribute, followed by an equals sign, followed by the destination attribute. For example: source_attribute1=destination_attribute. The plugin gathers the source attributes that have a common destination. It takes the combined values of the source attributes and makes them the values of a (new) metacard attribute, the destination attribute. The strategy for combining the values is union, which means only all the values of the source attribute are added to the destination attribute (excluding duplicates) Note: Do not use the same destination attributes in both the Intersect and Union rule sets. The plugin behaves unpredictably. | none | false |

*Table 13. Metacard Validation Marker Plugin*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Enforced Validators | `enforcedMetacardValidators` | String | ID of Metacard Validator to enforce. Metacards that fail these validators are NOT ingested. | false | Enforce errors |
| enforceErrors | `Boolean` | Sets whether validation errors are enforced. This prevents ingest if errors are present. | true | true | Enforce warnings |

*Table 14. Catalog Federation Strategy*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Maximum start index | `maxStartIndex` | Integer | Sets a limit on the number of results this sorted federation strategy can handle from each federated source. A large start index in conjunction with several federated sources could yield a large result set, which the sorted federation strategy has a limited ability to do. The admin can make a rough calculation to decide what maximum start index to use based on the amount of memory in the system, the amount of federated sources, the number of threads, and the expected amount of query results requested ( (average # of threads) * (maximum # of federated sources) * (maxStartIndex + maximumQueryResults) ) must fit into the allocated memory of the running distribution. This field may be deprecated and removed when sorted federation strategy has the ability to sort a larger amount of results. | 50000 | true |
| Expiration Interval | `expirationIntervalInMinutes` | Long | Interval that Solr Cache checks for expired documents to remove. | 10 | true |
| Expiration Age | `expirationAgeInMinutes` | Long | The number of minutes a document remains in the cache before it expires . Default is 7 days. | 10080 | true |
| Query Result Cache Strategy | `cacheStrategy` | String | Strategy for caching query results. Valid entries are ALL, FEDERATED, and NONE. | ALL | true |
| Cache Remote Ingests | `cacheRemoteIngests` | Boolean | Cache remote ingest results | false | true |

*Table 15. PDF Input Transformer*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Use PDF Title | `usePdfTitleAsTitle` | Boolean | Use the PDF's metadata to determine the metacard title. If this is not enabled, the metacard title is the file name. | false | true |
| Maximum text extraction length (bytes) | `previewMaxLength` | Integer | The maximum length of text to be extracted. | 30000 | true |
| Maximum xml metadata length (bytes) | `metadataMaxLength` | Integer | The maximum length of xml metadata to be extracted. | 5000000 | true |

*Table 16. Historian*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Enable Versioning | `historyEnabled` | Boolean | Enables versioning of both metacards and content. | true | true |

*Table 17. Catalog Metacard Ingest Network Plugin*

| Name | Id | Type | Description | Default Value | Required | Criteria |
|---|---|---|---|---|---|---|
| criteriaKey | String | Specifies the criteria for the test of equality; which value is tested? IP Address? Hostname? | remoteAddr | true | Expected Value | expectedValue |

| Name | Id | Type | Description | Default Value | Required | Criteria |
|---|---|---|---|---|---|---|
| String | The value that the criteria must equate to for the attribute overrides to occur. | | true | New Attributes | newAttributes | String" |

*Table 18. CSW Connected Source*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Source ID | `id` | String | The unique name of the Source. | CSW | true |
| CSW URL | `cswUrl` | String | URL to the endpoint implementing the Catalogue Service for Web (CSW) spec. | null | true |
| Event Service Address | `eventServiceAddress` | String | DDF Event Service endpoint. Do NOT include .wsdl or ?wsdl. | null | false |
| Register for Events | `registerForEvents` | Boolean | Check to register for events from this connected source. | false | false |
| Authentication Type | `authenticationType` | String | Authentication type to use when federating. | saml | true |
| Username | `username` | String | Username for CSW Service. Required if basic authentication type is selected. | null | false |
| Password | `password` | String | Password for CSW Service. Required if basic authentication type is selected. | null | false |
| Disable CN Check | `disableCnCheck` | Boolean | Disable CN check for the server certificate. This should only be used when testing. | false | true |

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Force Longitude/ Latitude coordinate order | `isLonLatOrder` | Boolean | Force Longitude/Latitude coordinate order. | false | true |
| Use posList in LinearRing | `usePosList` | Boolean | Use a <posList> element rather than a series of <pos> elements when issuing geospatial queries containing a LinearRing. | false | false |
| Metacard Mappings | `metacardMappings` | String | Mapping of the Metacard Attribute names to their CSW property names. The format should be `'title=dc:title'`. | effective=created, created=dateSubmitted, modified=modified, thumbnail=references, content-type=type, id=identifier, resource-uri=source | false |
| Poll Interval | `pollInterval` | Integer | Poll Interval to Check if the Source is available (in minutes - minimum 1). | 5 | true |
| Connection Timeout | `connectionTimeout` | Integer | Amount of time to attempt to establish a connection before timing out, in milliseconds. | 30000 | true |
| Receive Timeout | `receiveTimeout` | Integer | Amount of time to wait for a response before timing out, in milliseconds. | 60000 | true |
| Output Schema | `outputSchema` | String | Output Schema | http://www.opengis.net/cat/csw/2.0.2 | true |
| Query Type Name | `queryTypeName` | String | Qualified Name for the Query Type used in the CSW GetRecords request. | csw:Record | true |

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Query Type Namespace | `queryTypeNamespace` | String | Namespace prefix for the Query Type used in the CSW GetRecords request. | http://www.opengis.net/cat/csw/2.0.2 | true |
| Force CQL Text as the Query Language | `isCqlForced` | Boolean | Force CQL Text. | false | true |
| Forced Spatial Filter Type | `forceSpatialFilter` | String | Force only the selected Spatial Filter Type as the only available Spatial Filter. | NO_FILTER | false |

*Table 19. Confluence Federated Source*

| Name | Property | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Source Name | `shortname` | String | | | Yes |
| Confluence Rest URL | `endpointUrl` | String | The Confluence Rest API endpoint URL. Example: https://{FQDN}:{PORT}/rest/api/content | | Yes |
| Authentication Type | `authenticationType` | String | The Discovery URL where the metadata of the OAuth Provider protecting the source is hosted. Required if OAuth 2.0 authentication type is selected. | saml | true |
| Username | `username` | String | Username for WFS Service. Required if basic authentication type is selected. | null | false |
| Password | `password` | Password | Password for WFS Service. Required if basic authentication type is selected. | null | false |
| Include Page Contents In Results | `includePageContent` | Boolean | Flag indicating if Confluence page contents should be included in the returned results. | false | No |

| Name | Property | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Include Archived Spaces | `includeArchivedSpaces` | Boolean | Flag indicating if archived confluence spaces should be included in search results. | false | No |
| Exclude Confluence Spaces | `excludeSpaces` | Boolean | Flag indicating if the list of Confluence Spaces should be excluded from searches instead of included. | false | No |
| Confluence Spaces | `confluenceSpaces` | String cardinality =1000 | The confluence spaces to include/exclude from searches. If no spaces are specified, all visible spaces are searched. | | No |
| Attribute Overrides | `additionalAttributes` | String cardinality =100 | Attribute Overrides - Optional: Metacard attribute overrides (Key-Value pairs) that can be set on the results comming from this source. If an attribute is specified here, it overwrites the metacard's attribute that was created from the Confluence source. The format should be 'key=value'. The maximum allowed size of an attribute override is 65,535 bytes. All attributes in the catalog taxonomy tables are injected into all metacards by default and can be overridden. | | No |
| Availability Poll Interval | `availabilityPollInterval` | Long | Availability polling interval in milliseconds. | 60000 | No |

*Table 20. Schematron Validation Services*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Ruleset Name | `id` | String | Give this ruleset a name | null | true |
| Root Namespace | `namespace` | String | The root namespace of the XML | null | true |

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Schematron File Names | `schematronFileNames` | String | Names of schematron files (*.sch) against which to validate metadata ingested into the Catalog. Absolute paths or relative paths may be specified. Relative paths are assumed to be relative to `<DDF_HOME>/schematron`. | null | true |

*Table 21. Metacard Backup File Storage Provider*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Keep Deleted Metacard | `keepDeletedMetacards` | Boolean | Should backups for deleted metacards be kept or removed. | false | true |
| Metacard Transformer Id | `metacardTransformerId` | String | ID of the metacard transformer to use to serialize metacard for backup. | metacard | true |
| Backup Invalid Metacards | `keepDeletedMetacards` | Boolean | Keep backups for metacards that fail validation with warnings or errors. | true | true |
| Metacard Backup Output Providers | `metacardOutputProviderIds` | Comma delimited list of metacard output provider IDs. | Metacard Backup Provider IDs to use for this backup plugin. | fileStorageProvider | true |

*Table 22. Catalog Backup Plugin*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Root backup directory path | `rootBackupDir` | String | Root backup directory for Metacards. A relative path is relative to <DDF_HOME>. | data/backup | true |
| Subdirectory levels | `subDirLevels` | Integer | Number of subdirectory levels to create. Two characters from the ID are used to name each subdirectory level. | 2 | true |

*Table 23. XML Attribute Security Policy Plugin*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| XML Elements: | `xmlElements` | String | XML elements within the metadata that are searched for security attributes. If these elements contain matching attributes, the values of the attributes are combined. | | true |
| Security Attributes (union): | `securityAttributeUnions` | String | Security Attributes. These attributes, if they exist on any of the XML elements listed above, have their values extracted and the union of all of the values is saved to the metacard. For example: if element1 and element2 both contain the attribute 'attr' and that attribute has values X,Y and X,Z, respectively, then the final result is the union of those values: X,Y,Z. The X,Y,Z value is the value that is placed within the security attribute on the metacard. | | false |
| Security Attributes (intersection): | `securityAttributeIntersections` | String | Security Attributes. These attributes, if they exist on any of the XML elements listed above, have their values extracted and the intersection of all of the values is saved to the metacard. For example: if element1 and element2 both contain the attribute 'attr' and that attribute has values X,Y and X,Z, respectively, then the final result is the intersection of those values: X. The X value is the value that is placed within the security attribute on the metacard. | null | false |

*Table 24. Catalog Preview*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Preview From Metadata | `previewFromMetadata` | Boolean | Allow Preview to be Extracted From Metadata. | false | true |

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Element Names to Preview | `previewElements` | String | Specify element names to preview from XML. Takes the text content of the first available element for preview. Note: This list is not used unless Preview From Metadata is enabled. | text,TEXT | true |

*Table 25. Metacard Validation Filter Plugin*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Attribute map | `attributeMap` | String | Mapping of Metacard SECURITY attribute to user attribute. Users with this role always receive metacards with errors and/or warnings. | invalid-state=local host-data-manager | false |
| Filter errors | `filterErrors` | Boolean | Sets whether metacards with validation errors are filtered for users without the configured user attribute. | true | false |
| Filter warnings | `filterWarnings` | Boolean | Sets whether metacards with validation warnings are filtered for users without the configured user attribute. | false | false |

*Table 26. Expiration Date Pre-Ingest Plugin*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Overwrite If Empty | `overwriteIfBlank` | Boolean | If this is checked, overwrite all blank expiration dates in metacards. If this is not checked, leave metacards with blank expiration dates as-is. | false | true |
| Overwrite If Exists | `overwriteIfExists` | Boolean | If this is checked, overwrite all existing non-empty expiration dates in metacards with a new date. If this is not checked, leave metacards with an existing expiration date. | false | true |
| Offset from Created Date (in days) | `offsetFromCreatedDate` | Integer | A metacard's new expiration date is calculated by adding this value (in days) to its created date. | 30 | true |

*Table 27. Catalog Standard Framework*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Enable Fanout Proxy | `fanoutEnabled` | Boolean | When enabled the Framework acts as a proxy, federating requests to all available sources. All requests are executed as federated queries and resource retrievals, allowing the framework to be the sole component exposing the functionality of all of its Federated Sources. | false | true |
| Enable Notifications | `notificationEnabled` | Boolean | Check to enable notifications. | true | false |
| Fanout tag blacklist | `fanoutTagBlacklist` | String | Ingest operations with tags in this list are rejected. | | true |

*Table 28. Tika Input Transformer*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Use Resource Title | `useResourceTitleAsTitle` | Boolean | Use the resource's metadata to determine the metacard title. If this is not enabled, the metacard title is the file name. | false | true |

*Table 29. Catalog OpenSearch Federated Source*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Source Name | `shortname` | String | null | DDF-OS | true |

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| OpenSearch service URL | `endpointUrl` | String | The OpenSearch endpoint URL or DDF's OpenSearch endpoint (https://{FQDN}:{PORT}/services/catalog/query) | ${org.codice.ddf.system.protocol}${org.codice.ddf.system.hostname}:${org.codice.ddf.system.port}${org.codice.ddf.system.rootContext}/catalog/query | true |
| Authentication Type | `authenticationType` | String | Authentication type to use when federating. | saml | true |
| Username | `username` | String | Username to use with HTTP Basic Authentication. Required if basic authentication type is selected. | | false |
| Password | `password` | Password | Password to use with HTTP Basic Authentication. Required if basic authentication type is selected. | | false |
| OAuth Discovery Url | `oauthDiscoveryUrl` | String | The Discovery URL where the metadata of the OAuth Provider protecting the source is hosted. Required if OAuth 2.0 authentication type is selected. | https://localhost:8443/auth/realms/master/.well-known/openid-configuration | false |
| OAuth Client ID | `oauthClientId` | String | Client ID registered with the OAuth provider. Required if OAuth 2.0 authentication type is selected. | ddf-client | false |
| OAuth Client Secret | `oauthClientSecret` | String | Client Secret registered with the OAuth provider. Required if OAuth 2.0 authentication type is selected. | secret | false |

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| OAuth Flow | `oauthFlow` | String | The OAuth flow to use when federating. Required if OAuth 2.0 authentication type is selected. | code | false |
| OpenSearch query parameters | `parameters` | String | Query parameters to use with the OpenSearch connection. | q,src,mr,start,count,mt,dn,lat,lon,radius,bbox,geometry,polygon,dtstart,dtend,dateName,filter,sort | true |
| Always perform local query | `localQueryOnly` | Boolean | When federating with other DDFs, keep this checked. If checked, this source performs a local query on the remote site (by setting src=local in endpoint URL), as opposed to an enterprise search. | true | true |
| Convert to BBox | shouldConvertToBBox | Boolean | Converts Polygon and Point-Radius searches to a Bounding Box for compatibility with older interfaces. Generated bounding box is a very rough representation of the input geometry. | true | true |
| Multi Point-Radius polygon approximation vertices | numMultiPointRadiusVertices | Integer | When performing a multi point-radius search, increase this value for more accurate polygon approximation. Minimum value is 4, maximum value is 32. | 32 | true |
| Point radius polygon simplification distance tolerance | distanceTolerance | Integer | The maximum distance (in meters) from the original vertices a reduced vertex may lie on a simplified circular polygon. | 1 | true |
| Disable CN Check | disableCnCheck | Boolean | Disable CN check for the server certificate. This should only be used when testing. | false | true |

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Connection Timeout | connection Timeout | Integer | Amount of time to attempt to establish a connection before timing out, in milliseconds. | 30000 | true |
| Receive Timeout | receiveTimeout | Integer | Amount of time to wait for a response before timing out, in milliseconds. | 60000 | true |
| Entry XML Element | markUpSet | String | XML Element from the Response Entry to transform into a Metacard. | | false |

*Table 30. Status Source Poller Runner*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Poll Interval (minutes) | `pollIntervalMinutes` | Integer | The interval (in minutes) at which to recheck the availability of all sources. Must be at least 1 minute.<br><br>**WARNING** There is a maximum delay of 2*`pollIntervalMinutes` for the Source Poller to be updated after the availability of a source changes or a source is created/modified/deleted. Currently the Standard Catalog Framework and the Catalog REST Endpoint use the Source Poller to get source availabilities. The `pollIntervalMinutes` should not be set to value a which results in an unacceptable maximum delay. | 1 | true |

*Table 31. Content File System Storage Provider*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Content Repository File Path | `baseContentDirectory` | String | Specifies the directory to use for the content repository. A shutdown of the server is necessary for this property to take effect. If a filepath is provided with directories that don't exist, File System Provider attempts to create them. | <DDF_HOME>/data/content/store | true |

*Table 32. Resource Download Settings*

| Name | Property | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Product Cache Directory | `productCacheDirectory` | String | Directory where retrieved products are cached for faster, future retrieval. If a directory path is specified with directories that do not exist, Product Download feature attempts to create those directories. Without configuration, the product cache directory is <DDF_HOME>/data/product-cache. If a relative path is provided it must be relative to the <DDF_HOME>. It is recommended to enter an absolute directory path such as /opt/product-cache in Linux or C:\product-cache in Windows. | | false |
| Enable Product Caching | `cacheEnabled` | Boolean | Check to enable caching of retrieved products. | true | false |
| Delay (in seconds) between product retrieval retry attempts | `delayBetweenRetryAttempts` | Integer | The time to wait (in seconds) between attempting to retry retrieving a product. | 10 | false |

| Name | Property | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Max product retrieval retry attempts | `maxRetryAttempts` | Integer | The maximum number of attempts to retry retrieving a product. | 3 | false |
| Product Retrieval Monitor Period | `retrievalMonitorPeriod` | Integer | How many seconds to wait and not receive product data before retrying to retrieve a product. | 5 | false |
| Always Cache Product | `cacheWhenCanceled` | Boolean | Check to enable caching of retrieved products even if client cancels the download. Note: this has no effect if product caching is disabled. | false | false |

*Table 33. Catalog Content Directory Monitor*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Directory Path | `monitoredDirectoryPath` | String | "Specifies the directory to be monitored, can be a filesystem path or webdav address (only supported for Monitor in place)" | false | true |
| Maximum Concurrent Files | `numThreads` | Integer | Specifies the maximum number of concurrent files to be processed within a directory (maximum of 8). If this number exceeds 8, 8 is used in order to preserve system resources. Make sure that your system has enough memory to support the number of concurrent processing threads across all directory monitors. | 1 | true |
| ReadLock Time Interval | `readLockIntervalMilliseconds` | Integer | Specifies the time to wait (in milliseconds) before acquiring a lock on a file in the monitored directory. This interval is used for sleeping between attempts to acquire the read lock on a file to be ingested. The default value of 100 milliseconds is recommended. | 100 | true |

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Processing Mechanism | `processingMechanism` | String | Choose what happens to the content item after it is ingested. Delete removes the original file after storing it in the content store. Move stores the item in the content store, and a copy under ./ingested, then removes the original file. (NOTE: this doubles the amount of disk space used.) Monitor in place indexes the file and serves it from its original location. If in place is used, then the URLResourceReader root resource directories configuration must be updated to allow downloading from the monitored directory (See URL Resource Reader). | in_place | false |
| Attribute Overrides | `attributeOverrides` | String | Optional: Metacard attribute overrides (Key-Value pairs) that can be set on the content monitor. If an attribute is specified here, it overwrites the metacard's attribute that was created from the content directory. The format should be 'key=value'. The maximum allowed size of an attribute override is 65,535 bytes. All attributes in the catalog taxonomy tables are injected into all metacards by default and can be overridden. | null | false |

## 1.3. Platform Application Reference

The Platform application is considered to be a core application of the distribution. The Platform application provides the fundamental building blocks that the distribution needs to run. These building blocks include subsets of:

- Karaf
- CXF
- Camel

A Command Scheduler is also included as part of the Platform application to allow users to schedule Command Line Shell Commands.

### 1.3.1. Platform Application Prerequisites

None.

### 1.3.2. Installing Platform

Install the Platform application through the Admin Console.

1. Navigate to the **Admin Console**.
2. Select the **System** tab.
3. Select the **Features** tab.
4. Install the `platform-app` feature.

### 1.3.3. Configuring the Platform Application

To configure the Platform Application:

1. Navigate to the Admin Console.
2. Select the **Platform** application.
3. Select the **Configuration** tab.

*Table 34. Platform Available Configurations*

| Name | Property | Description |
|---|---|---|
| Platform Command Scheduler | ddf.platform.scheduler.Command | Platform Command Scheduler. |
| Logging Service | org.codice.ddf.platform.logging.LoggingService | Logging Service configurations. |
| HTTP Response Security | org.codice.ddf.security.response.filter.ResponseHeaderConfig | HTTP Response Security response configurations. |
| Email Service | org.codice.ddf.platform.email.impl.SmtpClientImpl | Email Service configurations. |
| MIME Custom Types | DDF_Custom_Mime_Type_Resolver | DDF Custom Mime Types. |
| Landing Page | org.codice.ddf.distribution.landingpage.properties | Starting page for users to interact with DDF. |
| Platform UI | ddf.platform.ui.config | Platform UI configurations. |

*Table 35. Platform Command Scheduler*

| Name | Property | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Command | `command` | String | Shell command to be used within the container. For example, log:set DEBUG"> | | true |
| Interval | `intervalString` | String | The Interval String for each execution. Based on the Interval Type, this can be either a Cron String or a Second Interval. (e.x. '0 0 0 1/1 * ? *' or '12') | | true |
| Interval Type | `intervalType` | String | Interval Type | cronString | true |

*Table 36. Logging Service*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Max Log Events | `maxLogEvents` | Integer | The maximum number of log events stored for display in the Admin Console. This must be greater than 0 and must not exceed 5000. | 500 | true |

*Table 37. HTTP Response Security*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Content Security Policy | `xContentSecurityPolicy` | String | Instructions for the client browser detailing which location and/or which type of resources may be loaded. | | true |
| X-Frame-Options | `xFrameOptions` | String | The X-Frame-Options HTTP response header can be used to indicate whether or not a browser may render a page in a frame, iframe or object. | | true |
| X-XSS-Protection | `xXssProtection` | String | The HTTP X-XSS-Protection response header is a feature that stops pages from loading when they detect reflected cross-site scripting (XSS) attacks. | | true |

*Table 38. Email Service*

| Name | Property | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Host | `hostName` | String | Mail server hostname (must be resolvable by DNS) or IP address. | | Yes |
| Port | `portNumber` | Integer | Mail server port number. | 25 | Yes |
| User Name | `userName` | String | Mail server user name used only for authenticated connections over TLS. | | No |
| Password | `password` | Password | Mail server password used only for authenticated connections over TLS. | | No |

*Table 39. MIME Custom Types*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Resolver Name | `name` | String | null | DDF Custom Resolver | false |
| Priority | `priority` | Integer | null | 10 | true |
| File Extensions to Mime Types | `customMimeTypes` | String | List of key/value pairs where key is the file extension and value is the mime type, for example, `nitf=image/nitf` | null | true |

*Table 40. Landing Page*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Description | `description` | String | Specifies the description to display on the landing page. | As a common data layer, DDF provides secure enterprise-wide data access for both users and systems. | true |
| Phone Number | `phone` | String | Specifies the phone number to display on the landing page. | | true |

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Email Address | `email` | String | Specifies the email address to display on the landing page. | | true |
| External Web Site | `externalUrl` | String | Specifies the external web site URL to display on the landing page. | | true |
| Announcements | `announcements` | String | Announcements to display on the landing page. | null | true |
| Branding Background | `background` | String | Specifies the landing page background color. Use html css colors or #rrggbb. | | true |
| Branding Foreground | `foreground` | String | Specifies the landing page foreground color. Use html css colors or #rrggbb. | | true |
| Branding Logo | `logo` | String | Specifies the landing page logo. Use a base64 encoded image. | | true |
| Additional Links | `links` | String | Additional links to be displayed on the landing page. Use the format <text>,<link> (such as `example,http://www.example.com`). Empty entries are ignored. | | yes |

*Table 41. Platform UI Configuration*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Enable System Usage Message | `systemUsageEnabled` | Boolean | Turns on a system usage message, which is shown when the Search Application is opened. | false | true |
| System Usage Message Title | `systemUsageTitle` | String | A title for the system usage Message when the application is opened. | | false |
| System Usage Message | `systemUsageMessage` | String | A system usage message to be displayed to the user each time the user opens the application. | | false |

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Show System Usage Message once per session | `systemUsageOncePerSession` | Boolean | With this selected, the system usage message is shown once for each browser session. Uncheck this to have the usage message appear every time the search window is opened or refreshed. | true | true |
| Header | `header` | String | Specifies the header text to be rendered on all pages. | | false |
| Footer | `footer` | String | Specifies the footer text to be rendered on all pages. | | false |
| Text Color | `color` | String | Specifies the Text Color of the Header and Footer. Use html css colors or `#rrggbb`. | | false |
| Background Color | `background` | String | Specifies the Background Color of the Header and Footer. Use html css colors or `#rrggbb`. | | false |
| Session Timeout | `timeout` | Integer | Specifies the length of inactivity (in minutes) that causes a user to be logged out automatically. This value must be 2 minutes or greater, as users are warned when only 1 minute remains. If a value of less than 2 minutes is used, the timeout is set to the default time of 15 minutes. | 15 | true |

# 1.4. Security Application Reference

The Security application provides authentication, authorization, and auditing services for the DDF. These services comprise both a framework that developers and integrators can extend as well as a reference implementation that meets security requirements.

This section documents the installation, maintenance, and support of this application.

*Features Included in Security*

- Security Core
- Security Encryption
- Security PEP

- Security PDP

### 1.4.1. Security Prerequisites

To use the Security application, the following applications/features must be installed:

- Platform

### 1.4.2. Installing Security

Install the Security application through the Admin Console.

1. Navigate to the **Admin Console**.
2. Select the **System** tab.
3. Select the **Features** tab.
4. Install the `security-app` feature.

### 1.4.3. Configuring the Security Application

To configure the Security Application:

1. Navigate to the Admin Console.
2. Select the **Security** application.
3. Select the **Configuration** tab.

*Table 42. Security Available Configurations*

| Name | Property | Description |
|---|---|---|
| Security STS LDAP and Roles Claims Handler | Claims_Handler_Manager | STS Ldap and Roles Claims Handler Configuration. |
| SAML NameID Policy | ddf.security.service.SecurityManager | SAML NameID Policy. |
| Session | org.codice.ddf.security.filter.login.Session | Session configurations. |
| File Based Claims Handler | org.codice.ddf.security.sts.claims.property.PropertyFileClaimsHandler | File Based Claims Handler. |
| Guest Claims Configuration | ddf.security.guest.realm | Guest Claims configurations. |
| Security STS Server | ddf.security.sts | STS configurations. |
| IdP Client | org.codice.ddf.security.idp.client.IdpMetadata | IdP Client configurations. |

| Name | Property | Description |
|---|---|---|
| Logout Page | org.codice.ddf.security.idp.client.LogoutRequestService | Logout Page configurations. |
| Security AuthZ Realm | ddf.security.pdp.realm.AuthzRealm | AuthZ Security configurations. |
| Web Context Policy Manager | org.codice.ddf.security.policy.context.impl.PolicyManager | Web Context Security Policies. |
| SAML Handler | org.codice.ddf.security.idp.client.IdpHandler | IdP Handler configurations. |
| Security STS Client | ddf.security.sts.client.configuration | STS Client configurations. |
| Security STS PKI Token Validator | org.codice.ddf.security.validator.pki | STS PKI Token Validator configurations. |
| Security SOAP Guest Interceptor | org.codice.ddf.security.interceptor.GuestInterceptor | Security SOAP Guest Interceptor. |
| OIDC Handler | org.codice.ddf.security.handler.oidc.OidcHandler | OIDC Handler configurations. |

*Table 43. Security STS LDAP and Roles Claims Handler*

| Name | Property | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| LDAP URL | `url` | String | true | `ldaps://${org.codice.ddf.system.hostname}:1636` | LDAP or LDAPS server and port |
| StartTLS | `startTls` | Boolean | Determines whether or not to use StartTLS when connecting via the ldap protocol. This setting is ignored if the URL uses ldaps. | `false` | true |
| LDAP Bind User DN | `ldapBindUserDn` | String | DN of the user to bind with LDAP. This user should have the ability to verify passwords and read attributes for any user. | `cn=admin` | true |
| LDAP Bind User Password | `password` | Password | Password used to bind user with LDAP. | `secret` | true |

| Name | Property | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| LDAP Group User Membership Attribute | `membershipUserAttribute` | String | Attribute used as the membership attribute for the user in the group. Usually this is uid, cn, or something similar. | `uid` | true |
| LDAP User Login Attribute | `loginUserAttribute` | String | Attribute used as the login username. Usually this is uid, cn, or something similar. | `uid` | true |
| LDAP Base User DN | `userBaseDn` | String | Full LDAP path to where users can be found. | `ou=users\,dc=example\,dc=com` | true |
| Override User Certificate DN | `overrideCertDn` | Boolean | When checked, this setting ignores the DN of a user and instead uses the LDAP Base User DN value. | `false` | true |
| LDAP Group ObjectClass | `objectClass` | String | ObjectClass that defines structure for group membership in LDAP. Usually this is groupOfNames or groupOfUniqueNames. | `groupOfNames` | true |
| LDAP Membership Attribute | `memberNameAttribute` | String | Attribute used to designate the user's name as a member of the group in LDAP. Usually this is member or uniqueMember. | `member` | true |
| LDAP Base Group DN | `groupBaseDn` | String | Full LDAP path to where groups can be found. | `ou=groups\,dc=example\,dc=com` | true |
| Attribute Map File | `propertyFileLocation` | String | Location of the file which contains user attribute maps to use. | `<INSTALL_HOME>/etc/ws-security/attributeMap.properties` | true |

*Table 44. SAML NameID Policy*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| SAML NameID Policy | `usernameAttributeList` | String | List of attributes that are considered for replacing the username of the logged in user. If any of these attributes match any of the attributes within the SecurityAssertion, the value of the first matching attribute is used as the username. (Does not apply when NameIDFormat is of the following: X509, persistent, kerberos or unspecified, and the username is not empty). | http://schemas.xmlsoap.org/ws/2005/05/identity/claims/nameidentifier, uid | true |

*Table 45. Session*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Session Timeout (in minutes) | `expirationTime` | Integer | Specifies the length of inactivity (in minutes) between client requests before the servlet container invalidates the session (this applies to all client sessions). This value must be 2 minutes or greater, as users are warned when only 1 minute remains. If a value of less than 2 minutes is used, the timeout is set to the default time of 31 minutes.<br><br>See also Platform UI Config. | 31 | true |

*Table 46. File Based Claims Handler*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Role Claim Type | `roleClaimType` | String | Role claim URI. | http://schemas.xmlsoap.org/ws/2005/05/identity/claims/role | true |

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| ID Claim Type | `idClaimType` | String | ID claim URI. | http://schemas.xmlsoap.org/ws/2005/05/identity/claims/nameidentifier | true |
| User Role File | `propertyFileLocation` | String | Location of the file which maps roles to users. | etc/users.properties | true |
| User Attribute File | `usersAttributesFileLocation` | String | Location of the file which maps attributes to users. | etc/users.attributes | true |

*Table 47. Guest Claims Configuration*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Attributes | `attributes` | String | The attributes to be returned for any Guest user. | http://schemas.xmlsoap.org/ws/2005/05/identity/claims/nameidentifier=guest,http://schemas.xmlsoap.org/ws/2005/05/identity/claims/role=guest | true |

*Table 48. Security STS Server*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| SAML Assertion Lifetime | `lifetime` | Long | Set the number of seconds that an issued SAML assertion is valid. | 1800 | true |

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Token Issuer | `issuer` | String | The name of the server issuing tokens. Generally this is unique identifier of this IdP. | https://${org.codice.ddf.system.hostname}:${org.codice.ddf.system.httpsPort}${org.codice.ddf.system.rootContext}/idp/login | true |
| Signature Username | `signatureUsername` | String | Alias of the private key in the STS Server's keystore used to sign messages. | ${org.codice.ddf.system.hostname} | true |
| Encryption Username | `encryptionUsername` | String | Alias of the private key in the STS Server's keystore used to encrypt messages. | ${org.codice.ddf.system.hostname} | true |

*Table 49. IdP Client*

| Name | Id | Type | Description | Default Value |
|---|---|---|---|---|
| IdP Metadata | `metadata` | String | Refer to metadata by HTTPS URL (https://), file URL (file:), or an XML block(<md:EntityDescriptor>... </md:EntityDescriptor>). | https://${org.codice.ddf.system.hostname}:${org.codice.ddf.system.httpsPort}/services/idp/login/metadata |
| Perform User-Agent Check | `userAgentCheck` | Boolean | If selected, this allows clients that do not support ECP and are not browsers to fall back to PKI, BASIC, and potentially GUEST authentication, if enabled. | true |

*Table 50. Logout Page*

| Name | Id | Type | Description | Default Value |
|---|---|---|---|---|
| Logout Page Time Out | `logOutPageTimeOut` | Long | This is the time limit that the SAML client waits for a user to click log out on the logout page. Any requests that take longer than this time for the user to submit are rejected."/> | 3600000 |

*Table 51. Security AuthZ Realm*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Match-All Mappings | `matchAllMappings` | String | List of 'Match-All' subject attribute to Metacard attribute mapping. All values of this metacard key must be present in the corresponding subject key values. Format is subjectAttrName=metacardAttrName. | | false |
| Match-One Mappings | `matchOneMappings` | String | List of 'Match-One' subject attribute to Metacard attribute mapping. One value of this metacard key must be present in the corresponding subject key values. Format is subjectAttrName=metacardAttrName. | | false |
| Environment Attributes | `environmentAttributes` | String | List of environment attributes to pass to the XACML engine. Format is attributeId=attributeValue1,attributeValue2. | | false |

*Table 52. Web Context Policy Manager*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Context Traversal Depth | `traversalDepth` | Integer | Depth to which paths are traversed. Any value greater than 500 is set to 500. | 20 | true |
| Allow Guest Access | `guestAccess` | Boolean | Allow guest access to all web contexts. Required attributes can be used to restrict access to contexts from guest users. | true | true |

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Allow Session Storage | `sessionAccess` | Boolean | Allow for session cookies to be used. Note that the SAML and OIDC authentication types require session storage to be enabled. | true | true |
| Authentication Types for Web Pages | `webAuthenticationTypes` | String | List of authentication types required for all web pages (these are all context paths except /services). List of valid authentication types are: BASIC, PKI, SAML, and OIDC. Example: AUTH1 | AUTH2 | AUTH3 |
| PKI | `BASIC` | true | Authentication Types for Endpoints | endpointAuthenticationTypes | String |
| List of authentication types required for all endpoints (these are context paths that start with /services). List of valid authentication types are: BASIC, PKI, SAML, and OIDC. Example: AUTH1 | `AUTH2` | AUTH3 | PKI | BASIC | true |

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Required Attributes | `requiredAttributes` | String | List of attributes required for each Web Context. Example: /context={role=role1;type=type1} | /=,/admin={http://schemas.xmlsoap.org/ws/2005/05/identity/claims/role=system-admin},/system={http://schemas.xmlsoap.org/ws/2005/05/identity/claims/role=system-admin},/security-config={http://schemas.xmlsoap.org/ws/2005/05/identity/claims/role=system-admin} | true |

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| White Listed Contexts | `whiteListContexts` | String | List of contexts that do not use security. Note that sub-contexts to ones listed here also skip security, unless authentication types are provided for it. For example: if /foo is listed here, then /foo/bar also does not require any sort of authentication. However, if /foo is listed and /foo/bar has authentication types provided in the 'Authentication Types' field, then that more specific policy is used. | ${org.codice.ddf.system.rootContext}/SecurityTokenService,${org.codice.ddf.system.rootContext}/internal/metrics,/proxy,${org.codice.ddf.system.rootContext}/saml,${org.codice.ddf.system.rootContext}/idp,/idp,${org.codice.ddf.system.rootContext}/platform/config/ui,/logout | true |

*Table 53. SAML Handler*

| Name | Id | Type | Description | Default Value |
|---|---|---|---|---|
| Authentication Context Class | `authContextClasses` | String | Authentication Context Classes that are considered acceptable means of authentication by the SAML handler. | urn:oasis:names:tc:SAML:2.0:ac:classes:Password,urn:oasis:names:tc:SAML:2.0:ac:classes:PasswordProtectedTransport,urn:oasis:names:tc:SAML:2.0:ac:classes:X509,urn:oasis:names:tc:SAML:2.0:ac:classes:SmartcardPKI,urn:oasis:names:tc:SAML:2.0:ac:classes:SoftwarePKI,urn:oasis:names:tc:SAML:2.0:ac:classes:SPKI,urn:oasis:names:tc:SAML:2.0:ac:classes:TLSClient |

*Table 54. Security STS Client*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| SAML Assertion Type | `assertionType` | String | The version of SAML to use. Most services require SAML v2.0. Changing this value from the default could cause services to stop responding. | http://docs.oasis-open.org/wss/oasis-wss-saml-token-profile-1.1#SAMLV2.0 | true |

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| SAML Key Type | `keyType` | String | The key type to use with SAML. Most services require Bearer. Changing this value from the default could cause services to stop responding. | http://docs.oasis-open.org/ws-sx/ws-trust/200512/Bearer | true |
| SAML Key Size | `keySize` | String | The key size to use with SAML. The default key size is 256 and this is fine for most applications. Changing this value from the default could cause services to stop responding. | 256 | true |
| Use Key | `useKey` | Boolean | Signals whether or not the STS Client should supply a public key to embed as the proof key. Changing this value from the default could cause services to stop responding. | true | true |
| STS WSDL Address | `address` | String | STS WSDL Address | ${org.codice.ddf.system.protocol}${org.codice.ddf.system.hostname}:${org.codice.ddf.system.port}${org.codice.ddf.system.rootContext}/SecurityTokenService?wsdl | true |
| STS Endpoint Name | `endpointName` | String | STS Endpoint Name. | {http://docs.oasis-open.org/ws-sx/ws-trust/200512/}STS_Port | false |

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| STS Service Name | `serviceName` | String | STS Service Name. | {http://docs.oasis-open.org/ws-sx/ws-trust/200512/}SecurityTokenService | false |
| Signature Properties | `signatureProperties` | String | Path to Signature crypto properties. This path can be part of the classpath, relative to <DDF_HOME>, or an absolute path on the system. | etc/ws-security/server/signature.properties | true |
| Encryption Properties | `encryptionProperties` | String | Path to Encryption crypto properties file. This path can be part of the classpath, relative to <DDF_HOME>, or an absolute path on the system. | etc/ws-security/server/encryption.properties | true |
| STS Properties | `tokenProperties` | String | Path to STS crypto properties file. This path can be part of the classpath, relative to <DDF_HOME>, or an absolute path on the system. | etc/ws-security/server/signature.properties | true |

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Claims | `claims` | String | List of claims that should be requested by the STS Client. | http://schemas.xmlsoap.org/ws/2005/05/identity/claims/nameidentifier,http://schemas.xmlsoap.org/ws/2005/05/identity/claims/emailaddress,http://schemas.xmlsoap.org/ws/2005/05/identity/claims/surname,http://schemas.xmlsoap.org/ws/2005/05/identity/claims/givenname,http://schemas.xmlsoap.org/ws/2005/05/identity/claims/role | true |

*Table 55. Security STS PKI Token Validator*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Realms | `realms` | String | The realms to be validated by this validator. | karaf | true |

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Do Full Path Validation | `pathValidation` | Boolean | Validate the full certificate path. Uncheck to only validate the subject cert. (RFC5280 6.1) | true | true |

*Table 56. Security SOAP Guest Interceptor*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Deny Guest Access | `guestAccessDenied` | Boolean | If set to true, no guest access is allowed via this guest interceptor. If set to false, this interceptor generates guest tokens for incoming requests that lack a WS-Security header. | false | false |

*Table 57. OIDC Handler*

| Name | Id | Type | Description | Default Value |
|---|---|---|---|---|
| IdP Type | `idpType` | String | IdP type to use. | Keycloak |
| Client ID | `clientId` | String | Unique ID for the client, this may be provided by the Identity Provider. | ddf-client |
| Realm/Tenant | `realm` | String | Realm to use for a multi-tenant environment. This is required for Keycloak or Azure. | master |
| Secret | `secret` | String | This value must match the value set on the Identity Provider. | secret |
| Discovery URI | `discoveryUri` | String | Discovery URI for fetching OP metadata (http://openid.net/specs/openid-connect-discovery-1_0.html). | http://localhost:8080/auth/realms/master/.well-known/openid-configuration |
| Base URI | `baseUri` | String | Base URI for IdP. Do not fill out both this and the Discovery URI. Only one is needed depending on the IdP in use. | http://localhost:8080/auth |

| Name | Id | Type | Description | Default Value |
|---|---|---|---|---|
| Logout URI | `logoutUri` | String | URI directing to single logout service of the IdP in use. | http://localhost:8080/auth/realms/master/protocol/openid-connect/logout |
| Scope | `scope` | String | OIDC scopes. | openid profile email resource.read |
| Use Nonce | `useNonce` | Boolean | Whether or not to use nonce in JWT. | true |
| Response Type | `responseType` | String | Response type to use. | code |
| Mode | `responseMode` | String | Mode. Leave blank if you are unsure of the value to use. | form_post |

# 1.5. Solr Catalog Application Reference

DDF uses Solr for data storage, by default.

## 1.5.1. Solr Catalog Prerequisites

To use the Solr Catalog Application, the following apps/features must be installed:

- Platform
- Catalog

## 1.5.2. Installing Solr Catalog

Install the Solr Catalog application through the Admin Console.

1. Navigate to the **Admin Console**.
2. Select the **System** tab.
3. Select the **Features** tab.
4. Install the `catalog-solr-app` feature.

### 1.5.3. Configuring the Solr Catalog Application

To configure the Solr Catalog Application:

1. Navigate to the Admin Console.
2. Select the **Solr Catalog** application.
3. Select the **Configuration** tab.

*Table 58. Solr Catalog Available Configurations*

| Name | Property | Description |
|---|---|---|
| Solr Catalog Provider | ddf.catalog.solr.provider.SolrCatalogProvider | Solr Catalog Provider. |

*Table 59. Solr Catalog Provider*

| Name | Property | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Force Auto Commit | `forceAutoCommit` | Boolean | WARNING: Performance Impact. Only in special cases should auto-commit be forced. Forcing auto-commit makes the search results visible immediately. | false | true |

## 1.6. Spatial Application Reference

The Spatial Application provides KML transformer and a KML network link endpoint that allows a user to generate a View-based KML Query Results Network Link.

### 1.6.1. Offline Gazetteer Service

In the Spatial Application, the `offline-gazetteer` is installed by default. This feature enables you to use an offline source of GeoNames data (as an alternative to the GeoNames Web service enabled by the `webservice-gazetteer` feature) to perform searches via the gazetteer search box in the Search UI.

Installing the `offline-gazetteer-index` feature provides a small set of GeoNames data to use with the offline gazetteer. The GeoNames data is stored as metacards in the core catalog and are tagged with `geonames` and `gazetteer`. This collection of GeoNames metacards can be expanded or updated by using the `gazetteer:update` command.

#### 1.6.1.1. Spatial Gazetteer Console Commands

The `gazetteer` commands provide the ability to interact with the local GeoNames metacard collection

in the core catalog. These GeoNames metacards are used by the `offline-gazetteer` feature, which is an optional feature available in this application and is explained above. Note that these commands are only available if the `offline-gazetteer` feature is installed.

*Table 60. Gazetteer Command Descriptions*

| Command | Description |
|---|---|
| `gazetteer:update` | Adds new gazetteer metacards to the core catalog from a resource.<br><br>The resource argument can be one of three types:<br><br>• a local file path to a `.txt`, `.zip`, or `.geo.json` GeoNames data file. If a path to a file ends in .geo.json, it is processed as a geoJSON feature collection and imported as supplementary shape data for GeoNames entries.<br>• a URL to a `.txt` or `.zip` GeoNames data file. GeoJSON URLs are not supported.<br>• a keyword to automatically process a GeoNames file from from http://download.geonames.org/export/dump. Valid keywords include<br>  ◦ a country code, which adds the country as GeoNames metacards in the core catalog. The full list of country codes available can be found in http://download.geonames.org/export/dump/countryInfo.txt.<br>  ◦ `cities1000`, `cities5000`, and `cities15000`, which adds cities to the index that have at least 1000, 5000, or 15000 people, respectively.<br>  ◦ `all`, which downloads all of the current country codes. This process may take some time.<br><br>The `-c` or `--create` flag can be used to clear out the existing gazetteer metacards before adding new entries. |
| `build-suggester-index` | Builds the Solr suggester index used for placename autocompletion when using the offline gazetteer. This index is built automatically whenever gazetteer metacards are created, updated, or deleted, but if those builds fail then this command can be used to attempt to build the index again. |

## 1.6.2. Standalone Solr Offline Gazetteer Feature

The Standalone Solr Offline Gazetteer is a reflection of the gazetteer data stored in the catalog but separated from other data. This allows the suggester to be separately rebuilt much quicker than for the entire catalog collection.

### 1.6.2.1. Installing Standalone Solr Offline Gazetteer

The Standalone Solr Offline Gazetteer is not installed by default but can be installed by running `feature:install catalog-solr-offline-gazetteer`. This installs:

- The plugin that intercepts gazetteer metacard creates/updates/deletes to the catalog collection (and

stores them in the standalone solr gazetteer collection)

- The gazetteer query service which registers the Query component that responds to requests from the UI gazetteer search box
- The `offline-solr-gazetteer:removeall` command which deletes all records in the gazetteer collection.
- The `offline-solr-gazetteer:synccatalog` command which syncs with the catalog and updates all records in the gazetteer collection to reflect it (or add them if they are not yet created)

#### 1.6.2.2. Special Note Regarding Installation

If the Spatial Geocoding Offline Catalog bundle and the bundle using the Gazetteer query service (for example, Intrigue) are both already running, you must restart the bundles consuming the service (for example, Intrigue) in order to pick up the correct one.

#### 1.6.2.3. Building the suggester index on Standalone Solr Offline Gazetteer

The suggester index is built when any of the other methods of building the catalog gazetteer are run, along with on initial install. So you can run `gazetteer:build-suggester-index` or `offline-solr-gazetteer:build-suggester-index` to build the suggester.

Another option is to send a build request via a solr client. An example of this is done through the Solr Dashboard after selecting the `gazetteer` collection and clicking `query`. Ensure that the Request-Handler (qt) is set to `/suggest` and then in the 'Extra Parameters' field add `suggest.build=true&suggest.dictionary=suggestPlace&suggest.q=bla`.

### 1.6.3. Spatial Prerequisites

To use the Spatial Application, the following apps/features must be installed:

- Platform
- Catalog

### 1.6.4. Installing Spatial

Install the Spatial application through the Admin Console.

1. Navigate to the **Admin Console**.
2. Select the **System** tab.
3. Select the **Features** tab.
4. Install the `spatial-app` feature.

### 1.6.5. Configuring the Spatial Application

To configure the Spatial Application:

1. Navigate to the Admin Console.
2. Select the **Spatial** application.
3. Select the **Configuration** tab.

*Table 61. Spatial Available Configurations*

| Name | Property | Description |
|---|---|---|
| Metacard to WFS Feature Map | org.codice.ddf.spatial.ogc.wfs.catalog.mapper.MetacardMapper | Metacard to WFS Feature Map. |
| Spatial KML Style Map Entry | org.codice.ddf.spatial.kml.style | Spatial KML Style Map Entry. |
| CSW Specification Profile Federated Source | Csw_Federated_Source | CSW Specification Profile Federated Source should be used when federating to an external CSW service. |
| WFS 2.0.0 Connected Source | Wfs_v2_0_0_Connected_Source | WFS 2.0.0 Connected Source. |
| WFS 2.0.0 Federated Source | Wfs_v2_0_0_Federated_Source | WFS 2.0.0 Federated Source. |
| CSW Federation Profile Source | Csw_Federation_Profile_Source | DDF's full-fidelity CSW Federation Profile. Use this when federating to a DDF-based system. |
| WFS 1.1.0 Federated Source | Wfs_v1_1_0_Federated_Source | WFS 1.1.0 Federated Source. |
| Spatial KML Endpoint | org.codice.ddf.spatial.kml.endpoint.KmlEndpoint | Spatial KML Endpoint. |
| GMD CSW ISO Federated Source | Gmd_Csw_Federated_Source | CSW Federated Source using the Geographic MetaData (GMD) format (ISO 19115:2003). |
| CSW Transactional Profile Federated Source | Csw_Transactional_Federated_Source | CSW Federated Source that supports transactions (create, update, delete). |
| GeoCoder Plugin | org.codice.ddf.spatial.geocoding.plugin.GeoCoderPlugin | GeoCoder Plugin. |

*Table 62. Metacard to WFS Feature Map*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Feature Type | `featureType` | String | Feature Type. Format is {URI}local-name | | true |
| Metacard Title to WFS Feature Property Mapping | `titleMapping` | String | Metacard Title to WFS Feature Property Mapping | | false |
| Metacard Created Date to WFS Feature Property Mapping | `createdDateMapping` | String | Metacard Created Date to WFS Feature Property Mapping | | false |
| Metacard Modified Date to WFS Feature Property Mapping | `modifiedDateMapping` | String | Metacard Modified Date to WFS Feature Property Mapping | | false |
| Metacard Effective Date to WFS Feature Property Mapping | `effectiveDateMapping` | String | Metacard Effective Date to WFS Feature Property Mapping | | false |
| Metacard Expiration Date to WFS Feature Property Mapping | `expirationDateMapping` | String | Metacard Expiration Date to WFS Feature Property Mapping | | false |

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Metacard Resource URI to WFS Feature Property Mapping | `resourceUriMapping` | String | Metacard Resource URI to WFS Feature Property Mapping | | false |
| Metacard Resource Size to WFS Feature Property Mapping | `resourceSizeMapping` | String | Metacard Resource Size to WFS Feature Property Mapping | | false |
| The Units of the Feature Property that corresponds to the Metacard Resource Size | `dataUnit` | String | The Units of the Feature Property that corresponds to the Metacard Resource Size | B | true |
| Metacard Thumbnail to WFS Feature Property Mapping | `thumbnailMapping` | String | Metacard Thumbnail to WFS Feature Property Mapping | | false |
| Metacard Geography to WFS Feature Property Mapping | `geographyMapping` | String | Metacard Geography to WFS Feature Property Mapping | | false |
| Temporal Sort By Feature Property | `sortByTemporalFeatureProperty` | String | When Sorting Temporally, Sort By This Feature Property. | | false |

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Relevance Sort By Feature Property | `sortByRelevanceFeatureProperty` | String | When Sorting By Relevance, Sort By This Feature Property. | | false |
| Distance Sort By Feature Property | `sortByDistanceFeatureProperty` | String | When Sorting By Distance, Sort By This Feature Property. | | false |

*Table 63. Spatial KML Style Map Entry*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Attribute Name | `attributeName` | String | The name of the Metacard Attribute to match against. For example, title, metadata-content-type, etc | null | true |
| Attribute Value | `attributeValue` | String | The value of the Metacard Attribute. | null | true |
| Style URL | `styleUrl` | String | The full qualified URL to the KML Style, for example, http://example.com/styles#myStyle | null | true |

*Table 64. CSW Specification Profile Federated Source*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Source ID | `id` | String | The unique name of the Source | null | true |

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| CSW URL | `cswUrl` | String | URL to the endpoint implementing the Catalogue Service for Web (CSW) spec | ${org.codice.ddf.external.protocol}${org.codice.ddf.external.hostname}:${org.codice.ddf.external.port}${org.codice.ddf.external.context}${org.codice.ddf.system.rootContext}/csw | true |
| Event Service Address | `eventServiceAddress` | String | DDF Event Service endpoint. | ${org.codice.ddf.external.protocol}${org.codice.ddf.external.hostname}:${org.codice.ddf.external.port}${org.codice.ddf.external.context}${org.codice.ddf.system.rootContext}/csw/subscription | false |
| Register for Events | `registerForEvents` | Boolean | Check to register for events from this source. | false | false |
| Authentication Type | `authenticationType` | String | Authentication type to use when federating. | saml | true |
| Username | `username` | String | Username for CSW Service. Required if basic authentication type is selected. | null | false |

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Password | `password` | Password | Password for CSW Service. Required if basic authentication type is selected. | null | false |
| OAuth Discovery Url | `oauthDiscoveryUrl` | String | The Discovery URL where the metadata of the OAuth Provider protecting the source is hosted. Required if OAuth 2.0 authentication type is selected. | https://localhost:8443/auth/realms/master/.well-known/openid-configuration | false |
| OAuth Client ID | `oauthClientId` | String | Client ID registered with the OAuth provider. Required if OAuth 2.0 authentication type is selected. | ddf-client | false |
| OAuth Client Secret | `oauthClientSecret` | String | Client Secret registered with the OAuth provider. Required if OAuth 2.0 authentication type is selected. | secret | false |
| OAuth Flow | `oauthFlow` | String | The OAuth flow to use when federating. Required if OAuth 2.0 authentication type is selected. | code | false |
| Disable CN Check | `disableCnCheck` | Boolean | Disable CN check for the server certificate. This should only be used when testing. | false | true |
| Coordinate Order | `coordinateOrder` | String | Coordinate order that remote source expects and returns spatial data in | LON_LAT | true |
| Use posList in LinearRing | `usePosList` | Boolean | Use a <posList> element rather than a series of <pos> elements when issuing geospatial queries containing a LinearRing | false | false |

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Metacard Mappings | `metacardMappings` | String | Mapping of the Metacard Attribute names to their CSW property names. The format should be 'title=dc:title'. | effective=created,created=dateSubmitted,modified=modified,thumbnail=references,content-type=type,id=identifier,resource-uri=source | false |
| Poll Interval | `pollInterval` | Integer | Poll Interval to Check if the Source is available (in minutes - minimum 1). | 5 | true |
| Connection Timeout | `connectionTimeout` | Integer | Amount of time to attempt to establish a connection before timing out,in milliseconds. | 30000 | true |
| Receive Timeout | `receiveTimeout` | Integer | Amount of time to wait for a response before timing out,in milliseconds. | 60000 | true |
| Output Schema | `outputSchema` | String | Output Schema | http://www.opengis.net/cat/csw/2.0.2 | true |
| Query Type Name | `queryTypeName` | String | Qualified Name for the Query Type used in the CSW GetRecords request | csw:Record | true |
| Query Type Namespace | `queryTypeNamespace` | String | Namespace for the Query Type used in the CSW GetRecords request | http://www.opengis.net/cat/csw/2.0.2 | true |
| Force CQL Text as the Query Language | `isCqlForced` | Boolean | Force CQL Text | false | true |
| Forced Spatial Filter Type | `forceSpatialFilter` | String | Force only the selected Spatial Filter Type as the only available Spatial Filter. | NO_FILTER | false |

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Security Attributes | `securityAttributeStrings` | String | Security attributes for this source | null | true |

*Table 65. WFS 2.0.0 Connected Source*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Source ID | `id` | String | The unique name of the Source | WFS | true |
| WFS URL | `wfsUrl` | String | URL to the endpoint implementing the Web Feature Service (WFS) 2.0.0 spec | null | true |
| Disable CN Check | `disableCnCheck` | Boolean | Disable CN check for the server certificate. This should only be used when testing. | false | true |
| Force Longitude/Latitude coordinate order | `isLonLatOrder` | Boolean | Force Longitude/Latitude coordinate order | false | true |
| Disable Sorting | `disableSorting` | Boolean | When selected, the system does not specify sort criteria with the query. This should only be used if the remote source is unable to handle sorting even when the capabilities states 'ImplementsSorting' is supported. | false | true |
| Authentication Type | `authenticationType` | String | The Discovery URL where the metadata of the OAuth Provider protecting the source is hosted. Required if OAuth 2.0 authentication type is selected. | saml | true |
| Username | `username` | String | Username for WFS Service. Required if basic authentication type is selected. | null | false |
| Password | `password` | Password | Password for WFS Service. Required if basic authentication type is selected. | null | false |

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Non Queryable Properties | `nonQueryableProperties` | String | Properties listed here are NOT queryable and any attempt to filter on these properties results in an exception. | null | false |
| Poll Interval | `pollInterval` | Integer | Poll Interval to Check if the Source is available (in minutes - minimum 1). | 5 | true |
| Forced Spatial Filter Type | `forceSpatialFilter` | String | Force only the selected Spatial Filter Type as the only available Spatial Filter. | NO_FILTER | false |
| Connection Timeout | `connectionTimeout` | Integer | Amount of time to attempt to establish a connection before timing out, in milliseconds. | 30000 | true |
| Receive Timeout | `receiveTimeout` | Integer | Amount of time to wait for a response before timing out, in milliseconds. | 60000 | true |

*Table 66. WFS 2.0.0 Federated Source*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Source ID | `id` | String | The unique name of the Source | WFS_v2_0_0 | true |
| WFS URL | `wfsUrl` | String | URL to the endpoint implementing the Web Feature Service (WFS) 2.0.0 spec | null | true |
| Disable CN Check | `disableCnCheck` | Boolean | Disable CN check for the server certificate. This should only be used when testing. | false | true |
| Coordinate Order | `coordinateOrder` | String | Coordinate order that remote source expects and returns spatial data in | LAT_LON | true |
| Forced Feature Type | `forcedFeatureType` | String | Force only a specific FeatureType to be queried instead of all featureTypes | null | false |

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Disable Sorting | `disableSorting` | Boolean | When selected, the system does not specify sort criteria with the query. This should only be used if the remote source is unable to handle sorting even when the capabilities states 'ImplementsSorting' is supported. | false | true |
| Authentication Type | `authenticationType` | String | The Discovery URL where the metadata of the OAuth Provider protecting the source is hosted. Required if OAuth 2.0 authentication type is selected. | saml | true |
| Username | `username` | String | Username for the WFS Service. Required if basic authentication type is selected. | null | false |
| Password | `password` | Password | Password for the WFS Service. Required if basic authentication type is selected. | null | false |
| Non Queryable Properties | `nonQueryableProperties` | String | Properties listed here are NOT queryable and any attempt to filter on these properties results in an exception. | null | false |
| Poll Interval | `pollInterval` | Integer | Poll Interval to Check if the Source is available (in minutes - minimum 1). | 5 | true |
| Forced Spatial Filter Type | `forceSpatialFilter` | String | Force only the selected Spatial Filter Type as the only available Spatial Filter. | NO_FILTER | false |
| Connection Timeout | `connectionTimeout` | Integer | Amount of time to attempt to establish a connection before timing out, in milliseconds. | 30000 | true |
| Receive Timeout | `receiveTimeout` | Integer | Amount of time to wait for a response before timing out, in milliseconds. | 60000 | true |

*Table 67. CSW Federation Profile Source*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Source ID | `id` | String | The unique name of the Source | CSW | true |

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| CSW URL | `cswUrl` | String | URL to the endpoint implementing the Catalogue Service for Web (CSW) spec | ${org.codice.ddf.external.protocol}${org.codice.ddf.external.hostname}:${org.codice.ddf.external.port}${org.codice.ddf.external.context}${org.codice.ddf.system.rootContext}/csw | true |
| CSW Event Service Address | `eventServiceAddress` | String | CSW Event Service endpoint. | ${org.codice.ddf.external.protocol}${org.codice.ddf.external.hostname}:${org.codice.ddf.external.port}${org.codice.ddf.external.context}${org.codice.ddf.system.rootContext}/csw/subscription | false |
| Register for Events | `registerForEvents` | Boolean | Check to register for events from this connected source. | false | false |
| Authentication Type | `authenticationType` | String | Authentication type to use when federating. | saml | true |
| Username | `username` | String | Username for CSW Service. Required if basic authentication type is selected. | null | false |

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Password | `password` | String | Password for CSW Service. Required if basic authentication type is selected. | null | false |
| OAuth Discovery Url | `oauthDiscoveryUrl` | String | The Discovery URL where the metadata of the OAuth Provider protecting the source is hosted. Required if OAuth 2.0 authentication type is selected. | https://localhost:8443/auth/realms/master/.well-known/openid-configuration | false |
| OAuth Client ID | `oauthClientId` | String | Client ID registered with the OAuth provider. Required if OAuth 2.0 authentication type is selected. | ddf-client | false |
| OAuth Client Secret | `oauthClientSecret` | String | Client Secret registered with the OAuth provider. Required if OAuth 2.0 authentication type is selected. | secret | false |
| OAuth Flow | `oauthFlow` | String | The OAuth flow to use when federating. Required if OAuth 2.0 authentication type is selected. | code | false |
| Connection Timeout | `connectionTimeout` | Integer | Amount of time to attempt to establish a connection before timing out,in milliseconds. | 30000 | true |
| Receive Timeout | `receiveTimeout` | Integer | Amount of time to wait for a response before timing out,in milliseconds. | 60000 | true |

*Table 68. WFS v1.1.0 Federated Source*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Source ID | `id` | String | The unique name of the Source | WFS | true |
| WFS URL | `wfsUrl` | String | URL to the endpoint implementing the Web Feature Service (WFS) spec | null | true |
| Disable CN Check | `disableCnCheck` | Boolean | Disable CN check for the server certificate. This should only be used when testing. | false | true |

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Coordinate Order | `coordinateOrder` | String | Coordinate order that remote source expects and returns spatial data in | LAT_LON | true |
| Forced Feature Type | `forcedFeatureType` | String | Force only a specific FeatureType to be queried instead of all featureTypes | null | false |
| Authentication Type | `authenticationType` | String | The Discovery URL where the metadata of the OAuth Provider protecting the source is hosted. Required if OAuth 2.0 authentication type is selected. | saml | true |
| Username | `username` | String | Username for WFS Service. Required if basic authentication type is selected. | null | false |
| Password | `password` | Password | Password for WFS Service. Required if basic authentication type is selected. | null | false |
| Non Queryable Properties | `nonQueryableProperties` | String | Properties listed here are NOT queryable and any attempt to filter on these properties results in an exception. | null | false |
| Poll Interval | `pollInterval` | Integer | Poll Interval to Check if the Source is available (in minutes - minimum 1). | 5 | true |
| Forced Spatial Filter Type | `forceSpatialFilter` | String | Force only the selected Spatial Filter Type as the only available Spatial Filter. | NO_FILTER | false |
| Connection Timeout | `connectionTimeout` | Integer | Amount of time to attempt to establish a connection before timing out, in milliseconds. | 30000 | true |
| Receive Timeout | `receiveTimeout` | Integer | Amount of time to wait for a response before timing out, in milliseconds. | 60000 | true |
| SRS Name | `srsName` | String | SRS Name to use in outbound GetFeature requests. The SRS Name parameter is used to assert the specific CRS transformation to be applied to the geometries of the features returned in a response document. | EPSG:4326 | false |

*Table 69. Spatial KML Endpoint*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Style Document | `styleUrl` | String | KML Document containing custom styling. This is served up by the KmlEndpoint. (for example, file:///path/to/kml/style/doc.kml) | | false |
| Icons Location | `iconLoc` | String | Location of icons for the KML endpoint | | false |
| Description | `description` | String | Description of this NetworkLink. Enter a short description of what this NetworkLink provides. | | false |
| Web Site | `webSite` | String | URL of the web site to be displayed in the description. | | false |
| Logo | `logo` | String | URL to the logo to be displayed in the description. | | false |
| Visible By Default | `visibleByDefault` | Boolean | Check if the source NetworkLinks should be visible by default. | false | false |
| Max Number of Results | `maxResults` | Integer | The maximum number of results that should be returned from each layer. | 100 | false |

*Table 70. GMD CSW ISO Federated Source*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Source ID | `id` | String | The unique name of the Source | | true |
| CSW URL | `cswUrl` | String | URL to the endpoint implementing the Catalogue Service for Web (CSW) spec | | true |
| Authentication Type | `authenticationType` | String | Authentication type to use when federating. | saml | true |
| Username | `username` | String | Username for CSW Service. Required if basic authentication type is selected. | | false |
| Password | `password` | Password | Password for CSW Service. Required if basic authentication type is selected. | | false |

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| OAuth Discovery Url | `oauthDiscoveryUrl` | String | The Discovery URL where the metadata of the OAuth Provider protecting the source is hosted. Required if OAuth 2.0 authentication type is selected. | https://localhost:8443/auth/realms/master/.well-known/openid-configuration | false |
| OAuth Client ID | `oauthClientId` | String | Client ID registered with the OAuth provider. Required if OAuth 2.0 authentication type is selected. | ddf-client | false |
| OAuth Client Secret | `oauthClientSecret` | String | Client Secret registered with the OAuth provider. Required if OAuth 2.0 authentication type is selected. | secret | false |
| OAuth Flow | `oauthFlow` | String | The OAuth flow to use when federating. Required if OAuth 2.0 authentication type is selected. | code | false |
| Disable CN Check | `disableCnCheck` | Boolean | Disable CN check for the server certificate. This should only be used when testing. | false | true |
| Coordinate Order | `coordinateOrder` | String | Coordinate order expected and returned by remote source | LON_LAT | true |
| Use posList in LinearRing | `usePosList` | Boolean | Use a <posList> element rather than a series of <pos> elements when issuing geospatial queries containing a LinearRing | false | false |

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Metacard Mappings | `metacardMappings` | String | Mapping of the Metacard Attribute names to their CSW property names. The format should be 'title=dc:title'. | id=apiso:Identifier,effective=apiso:PublicationDate,created=apiso:CreationDate,modified=apiso:RevisionDate,title=apiso:AlternateTitle,AnyText=apiso:AnyText,ows:BoundingBox=apiso:BoundingBox,language=apiso:Language,language=apiso:ResourceLanguage,datatype=apiso:Type,description=apiso:Abstract,contact.point-of-contact-name=apiso:OrganisationName,topic.keyword=apiso:Subject,media.format=apiso:Format,modified=apiso:Modified | false |

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Poll Interval | `pollInterval` | Integer | Poll Interval to Check if the Source is available (in minutes - minimum 1). | 5 | true |
| Connection Timeout | `connectionTimeout` | Integer | Amount of time to attempt to establish a connection before timing out, in milliseconds. | 30000 | true |
| Receive Timeout | `receiveTimeout` | Integer | Amount of time to wait for a response before timing out, in milliseconds. | 60000 | true |
| Output Schema | `outputSchema` | String | Output Schema | http://www.isotc211.org/2005/gmd | true |
| Query Type Name | `queryTypeName` | String | Qualified Name for the Query Type used in the CSW GetRecords request | gmd:MD_Metadata | true |
| Query Type Namespace | `queryTypeNamespace` | String | Namespace for the Query Type used in the CSW GetRecords request | http://www.isotc211.org/2005/gmd | true |
| Force CQL Text | `isCqlForced` | Boolean | Force CQL Text as the Query Language | false | true |
| Forced Spatial Filter Type | `forceSpatialFilter` | String | Force only the selected Spatial Filter Type as the only available Spatial Filter. | NO_FILTER | false |
| Security Attributes | `securityAttributeStrings` | String | Security attributes for this source | | true |

*Table 71. CSW Transactional Profile Federated Source*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Source ID | `id` | String | The unique name of the Source | | true |

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| CSW URL | `cswUrl` | String | URL to the endpoint implementing the Catalogue Service for Web (CSW) spec | ${variable-name}org.codice.ddf.system.protocol}${variable-name}org.codice.ddf.system.hostname}:${variable-name}org.codice.ddf.system.port}${variable-name}org.codice.ddf.system.rootContext}/csw | true |
| Event Service Address | `eventServiceAddress` | String | Event Service endpoint. | ${variable-name}org.codice.ddf.system.protocol}${variable-name}org.codice.ddf.system.hostname}:${variable-name}org.codice.ddf.system.port}${variable-name}org.codice.ddf.system.rootContext}/csw/subscription | false |

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Register for Events | `registerForEvents` | Boolean | Check to register for events from this source. | false | false |
| Authentication Type | `authenticationType` | String | Authentication type to use when federating. | saml | true |
| Username | `username` | String | Username for CSW Service. Required if basic authentication type is selected. | | false |
| Password | `password` | Password | Password for CSW Service. Required if basic authentication type is selected. | | false |
| OAuth Discovery Url | `oauthDiscoveryUrl` | String | The Discovery URL where the metadata of the OAuth Provider protecting the source is hosted. Required if OAuth 2.0 authentication type is selected. | https://localhost:8443/auth/realms/master/.well-known/openid-configuration | false |
| OAuth Client ID | `oauthClientId` | String | Client ID registered with the OAuth provider. Required if OAuth 2.0 authentication type is selected. | ddf-client | false |
| OAuth Client Secret | `oauthClientSecret` | String | Client Secret registered with the OAuth provider. Required if OAuth 2.0 authentication type is selected. | secret | false |
| OAuth Flow | `oauthFlow` | String | The OAuth flow to use when federating. Required if OAuth 2.0 authentication type is selected. | code | false |
| Disable CN Check | `disableCnCheck` | Boolean | Disable CN check for the server certificate. This should only be used when testing. | false | true |
| Coordinate Order | `coordinateOrder` | String | Coordinate order expected and returned by remote source | LON_LAT | true |
| Use posList in LinearRing | `usePosList` | Boolean | Use a <posList> element rather than a series of <pos> elements when issuing geospatial queries containing a LinearRing | false | false |

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Metacard Mappings | `metacardMappings` | String | Mapping of the Metacard Attribute names to their CSW property names. The format should be 'title=dc:title'. | effective=created,created=dateSubmitted,modified=modified,thumbnail=references,content-type=type,id=identifier,resource-uri=source | false |
| Poll Interval | `pollInterval` | Integer | Poll Interval to Check if the Source is available (in minutes - minimum 1). | 5 | true |
| Connection Timeout | `connectionTimeout` | Integer | Amount of time to attempt to establish a connection before timing out, in milliseconds. | 30000 | true |
| Receive Timeout | `receiveTimeout` | Integer | Amount of time to wait for a response before timing out, in milliseconds. | 60000 | true |
| Output Schema | `outputSchema` | String | Output Schema | urn:catalog:metacard | true |
| Query Type Name | `queryTypeName` | String | Qualified Name for the Query Type used in the CSW GetRecords request | csw:Record | true |
| Query Type Namespace | `queryTypeNamespace` | String | Namespace for the Query Type used in the CSW GetRecords request | http://www.opengis.net/cat/csw/2.0.2 | true |
| Force CQL Text | `isCqlForced` | Boolean | Force CQL Text as the Query Language | false | true |
| Forced Spatial Filter Type | `forceSpatialFilter` | String | Force only the selected Spatial Filter Type as the only available Spatial Filter. | NO_FILTER | false |
| Security Attributes | `securityAttributeStrings` | String | Security attributes for this source | | true |

*Table 72. GeoCoder Plugin*

| Title | Property | Type | Description | Default Value |
|---|---|---|---|---|
| Radius | `radiusInKm` | Integer | The search radius from a Point in kilometers. | 10 |

# 1.7. Search UI Application Reference

The Search UI is a user interface that enables users to search a catalog and associated sites for content and metadata.

## 1.7.1. Search UI Prerequisites

To use the Search UI application, the following applications/features must be installed:

- Platform
- Catalog

## 1.7.2. Installing Search UI

Install the Search UI application through the Admin Console.

1. Navigate to the **Admin Console**.
2. Select the **System** tab.
3. Select the **Features** tab.
4. Install the `search-ui-app` feature.

## 1.7.3. Configuring the Search UI Application

To configure the Search UI Application:

1. Navigate to the Admin Console.
2. Select the **Search UI** application.
3. Select the **Configuration** tab.

*Table 73. Search UI Available Configurations*

| Name | Property | Description |
|---|---|---|
| Catalog UI Search Workspace Query Monitor | org.codice.ddf.catalog.ui.query.monitor.impl.WorkspaceQueryService | Catalog UI Search Workspace Query Monitor. |

| Name | Property | Description |
|---|---|---|
| Search UI Redirect | org.codice.ddf.ui.searchui.filter.RedirectServlet | Search UI redirect. |
| Catalog UI Search Workspace Service | org.codice.ddf.catalog.ui.query.monitor.impl.WorkspaceServiceImpl | Catalog UI Search Workspace Service. |
| Facet Attribute Whitelist | org.codice.ddf.catalog.plugin.facetattributeaccess.facetwhitelist | Facet Attribute Whitelist |
| Catalog UI Search Transformer Blacklists | org.codice.ddf.catalog.ui.transformer.TransformerDescriptors | Catalog UI Search Transformer Blacklists. |
| Email Notifier | org.codice.ddf.catalog.ui.query.monitor.email.EmailNotifier | Email Notifier. |
| Catalog UI Search Workspace Security | org.codice.ddf.catalog.ui.security | Catalog UI Search Workspace Security. |

*Table 74. Catalog UI Search Workspace Query Monitor*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Query Timeout | `queryTimeoutMinutes` | Long | Set the number of minutes to wait for query to complete. | `5` | true |
| Notification Time Interval | `queryTimeInterval` | Integer | Set the Relative Time Search (past X minutes up to 24 hours). Note: This queries for results from the interval to the time the query is sent out. | `1440` | true |

*Table 75. Search UI Redirect*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Redirect URI | `defaultUri` | String | Specifies the redirect URI to use when accessing the /search URI. | `${org.codice.ddf.external.context}/search/simple/` | true |

*Table 76. Catalog UI Search Workspace Service*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Maximum Subscriptions | `maxSubscriptions` | Integer | Specifies the maximum number of workspace subscriptions that may be queried for email notifications. | `100` | true |

*Table 77. Facet Attribute Whitelist*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Facet Attribute Whitelist | `facetAttributeWhitelist` | String | Attributes that can be faceted against through the catalog framework. Caution: Suggestion values are not protected by any security. Only choose attributes whose values are safe for all users to view. | | false |

*Table 78. Catalog UI Search Transformer Blacklists*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Metacard Transformer Blacklist | `blackListedMetacardTransformerIds` | String | The IDs of all Metacard Transformers services that do not show up as export actions in the UI. Every ID in this set removes that transformer as an export option in the UI. | `[]` | false |
| Query Response Transformer Blacklist | `blackListedQueryResponseTransformerIds` | String | The IDs of all Query Response Transformers services that do not show up as export actions in the UI. Every ID in this set removes that transformer as an export option in the UI. | `[zipCompression]` | false |

*Table 79. Catalog UI Search Email Notifier*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Subject | `subjectTemplate` | String | Set the subject line template. | `Workspace '%[attribute=title]' notification` | true |

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| Body | `bodyTemplate` | String | Set the body template. | `The workspace '%[attribute=title]' contains up to %[hitCount] results. Log in to see results https://{FQDN}:{PORT}/search/catalog/#workspaces/%attribute=id.` | true |
| From Address | `fromEmail` | String | Set the 'from' email address. | `donotreply@example.com` | true |

*Table 80. Catalog UI Search Workspace Security*

| Name | Id | Type | Description | Default Value | Required |
|---|---|---|---|---|---|
| System User Attribute | `systemUserAttribute` | String | The name of the attribute to determine the system user. | `http://schemas.xmlsoap.org/ws/2005/05/identity/claims/role` | true |
| System User Attribute Value | `systemUserAttributeValue` | String | The value of the attribute to determine the system user. | `system-user` | true |

# 2. Application Whitelists

Within each DDF application, certain packages are exported for use by third parties.

## 2.1. Packages Removed From Whitelist

In the transition of the whitelist from the ambiguous package listing to the new class listing several

errors were found. The packages originally listed that were removed either did not exist, contained experimental interfaces, or contained only internal implementations and should have never been included in the whitelist. The following is a list of packages that were listed in error and have been removed from the whitelist.

| | |
|---|---|
| **NOTE** | None of the packages in this list have been removed from the distribution. They may however be changed or removed in the future. |

Admin

- `org.codice.ddf.ui.admin.api.plugin`
- `org.codice.ddf.admin.configuration.plugin`

Catalog

- `org.codice.ddf.admin.configuration.plugin`
- `ddf.catalog.data.metacardtype`
- `ddf.catalog.federation.impl`
- `ddf.catalog.plugin.groomer`
- `ddf.catalog.pubsub`
- `ddf.catalog.pubsub.tracker`
- `ddf.catalog.resource.data`
- `ddf.catalog.resource.impl`
- `ddf.catalog.resourceretriever`
- `ddf.catalog.transformer.metacard.geojson`
- `ddf.common`
- `org.codice.ddf.endpoints`
- `org.codice.ddf.endpoints.rest`
- `org.codice.ddf.endpoints.rest.action`
- `org.codice.ddf.opensearch.query`
- `org.codice.ddf.opensearch.query.filter`

Platform

- `org.codice.ddf.configuration.admin`
- `org.codice.ddf.configuration.migration`
- `org.codice.ddf.configuration.persistence`
- `org.codice.ddf.configuration.persistence.felix`

- org.codice.ddf.configuration.status
- org.codice.ddf.parser
- org.codice.ddf.parser.xml
- org.codice.ddf.platform.error.handler
- org.codice.ddf.platform.util

Security

- ddf.security.assertion.impl
- ddf.security.common.audit
- ddf.security.http.impl
- ddf.security.impl
- ddf.security.pdp.realm
- ddf.security.permission
- ddf.security.principal
- ddf.security.realm.sts
- ddf.security.samlp.impl
- ddf.security.service.impl
- ddf.security.settings
- ddf.security.soap.impl
- ddf.security.sts
- ddf.security.ws.policy.impl
- org.codice.ddf.security.certificate.generator
- org.codice.ddf.security.certificate.keystore.editor
- org.codice.ddf.security.common
- org.codice.ddf.security.filter.authorization
- org.codice.ddf.security.filter.login
- org.codice.ddf.security.filter.websso
- org.codice.ddf.security.handler.basic
- org.codice.ddf.security.handler.guest.configuration
- org.codice.ddf.security.handler.guest
- org.codice.ddf.security.handler.pki
- org.codice.ddf.security.handler.saml
- org.codice.ddf.security.interceptor

- `org.codice.ddf.security.interceptor`
- `org.codice.ddf.security.policy.context.impl`
- `org.codice.ddf.security.servlet.logout`
- `org.codice.ddf.security.validator.username`

Spatial

- `org.codice.ddf.spatial.geocoder`
- `org.codice.ddf.spatial.geocoder.geonames`
- `org.codice.ddf.spatial.geocoding`
- `org.codice.ddf.spatial.geocoding.context`
- `org.codice.ddf.spatial.kml.endpoint`
- `org.codice.ddf.spatial.ogc.catalog.resource.impl`

## 2.2. Catalog Whitelist

The following classes have been exported by the Catalog application and are approved for use by third parties:

In package `ddf.catalog`

- `CatalogFramework`
- `Constants`

In package `ddf.catalog.cache`

- `ResourceCacheInterface` Deprecated

In package `ddf.catalog.data`

- `Attribute`
- `AttributeDescriptor`
- `AttributeType`
- `BinaryContent`
- `ContentType`
- `Metacard`
- `MetacardCreationException`
- `MetacardType`

- `MetacardTypeUnregistrationException`
- `Result`

In package `ddf.catalog.event`

- `DeliveryException`
- `DeliveryMethod`
- `EventException`
- `EventProcessor`
- `InvalidSubscriptionException`
- `Subscriber`
- `Subscription`
- `SubscriptionExistsException`
- `SubscriptionNotFoundException`

In package `ddf.catalog.federation`

- `Federatable`
- `FederationException`
- `FederationStrategy`

In package `ddf.catalog.filter`

- `AttributeBuilder`
- `BufferedSpatialExpressionBuilder`
- `ContextualExpressionBuilder`
- `EqualityExpressionBuilder`
- `ExpressionBuilder`
- `FilterAdapter`
- `FilterBuilder`
- `FilterDelegate`
- `NumericalExpressionBuilder`
- `NumericalRangeExpressionBuilder`
- `SpatialExpressionBuilder`
- `TemporalInstantExpressionBuilder`
- `TemporalRangeExpressionBuilder`
- `XPathBasicBuilder`

- `XPathBuilder`

In package `ddf.catalog.filter.delegate`

- `CopyFilterDelegate`
- `FilterToTextDelegate`

In package `ddf.catalog.operation`

- `CreateRequest`
- `CreateResponse`
- `DeleteRequest`
- `DeleteResponse`
- `Operation`
- `OperationTransaction`
- `Pingable`
- `ProcessingDetails`
- `Query`
- `QueryRequest`
- `QueryResponse`
- `Request`
- `ResourceRequest`
- `ResourceResponse`
- `Response`
- `SourceInfoRequest`
- `SourceInfoResponse`
- `SourceProcessingDetails`
- `SourceResponse`
- `Update`
- `UpdateRequest`
- `UpdateResponse`

In package `ddf.catalog.plugin`

- `AccessPlugin`
- `PluginExecutionException`
- `PolicyPlugin`

- `PolicyResponse`
- `PostFederatedQueryPlugin`
- `PostIngestPlugin`
- `PostQueryPlugin`
- `PostResourcePlugin`
- `PreDeliveryPlugin`
- `PreFederatedQueryPlugin`
- `PreIngestPlugin`
- `PreQueryPlugin`
- `PreResourcePlugin`
- `PreSubscriptionPlugin`
- `StopProcessingException`

In package `ddf.catalog.resource`

- `DataUsageLimitExceededException`
- `Resource`
- `ResourceNotFoundException`
- `ResourceNotSupportedException`
- `ResourceReader`
- `ResourceWriter`

In package `ddf.catalog.service`

- `ConfiguredService`

In package `ddf.catalog.source`

- `CatalogProvider`
- `ConnectedSource`
- `FederatedSource`
- `IngestException`
- `InternalIngestException`
- `RemoteSource`
- `Source`
- `SourceDescriptor`
- `SourceMonitor`

- `SourceUnavailableException`
- `UnsupportedQueryException`

In package `ddf.catalog.transform`

- `CatalogTransformerException`
- `InputCollectionTransformer`
- `InputTransformer`
- `MetacardTransformer`
- `QueryResponseTransformer`

In package `ddf.catalog.transformer.api`

- `MetacardMarshaller`
- `PrintWriter`
- `PrintWriterProvider`

In package `ddf.catalog.util`

- `Describable` Deprecated
- `Maskable`

In package `ddf.catalog.validation`

- `MetacardValidator`
- `ValidationException`

In package `ddf.geo.formatter`

- `CompositeGeometry`
- `GeometryCollection`
- `LineString`
- `MultiLineString`
- `MultiPoint`
- `MultiPolygon`
- `Point`
- `Polygon`

In package `ddf.util`

- `InetAddressUtil`

- `NamespaceMapImpl`
- `NamespaceResolver`
- `WktStandard`
- `XPathCache`
- `XPathHelper`
- `XSLTUtil`

## 2.3. Platform Whitelist

The following classes have been exported by the Platform application and are approved for use by third parties:

In package `ddf.action`

- `Action`
- `ActionProvider`
- `ActionRegistry`

In package `org.codice.ddf.branding`

- `BrandingPlugin`
- `BrandingRegistry`

In package `org.codice.ddf.configuration`

- `ConfigurationWatcher` Deprecated

## 2.4. Security Whitelist

The following classes have been exported by the Security application and are approved for use by third parties:

In package `ddf.security`

- `SecurityConstants`
- `Subject`

In package `ddf.security.assertion`

- `SecurityAssertion`

In package `ddf.security.common.util`

- `Security` Deprecated
- `SecurityProperties`
- `ServiceComparator`
- `SortedServiceList` Deprecated

In package `ddf.security.encryption`

- `EncryptionService`

In package `ddf.security.expansion`

- `Expansion`

In package `ddf.security.http`

- `SessionFactory`

In package `ddf.security.service`

- `SecurityManager`
- `SecurityServiceException`
- `TokenRequestHandler`

In package `ddf.security.sts.client.configuration`

- `STSClientConfiguration`

In package `ddf.security.ws.policy`

- `AbstractOverrideInterceptor`
- `PolicyLoader`

In package `org.codice.ddf.security.handler.api`

- `AuthenticationHandler`

In package `org.codice.ddf.security.policy.context.attributes`

- `ContextAttributeMapping`

In package `org.codice.ddf.security.policy.context`

- `ContextPolicy`

- `ContextPolicyManager`

## 2.5. Solr Catalog Whitelist

The following classes have been exported by the Solr Catalog application and are approved for use by third parties:

None.

## 2.6. Search UI Whitelist

The following classes have been exported by the Search UI application and are approved for use by third parties:

None.

# 3. DDF Dependency List

This list of DDF dependencies is automatically generated:

## 3.1. DDF 2.32.0 Dependency List

- `ca.juliusdavies:not-yet-commons-ssl:jar:0.3.11`
- `ch.qos.logback:logback-access:jar:1.2.3`
- `ch.qos.logback:logback-classic:jar:1.2.3`
- `ch.qos.logback:logback-core:jar:1.2.3`
- `com.connexta.arbitro:arbitro-core:jar:1.0.0`
- `com.fasterxml.jackson.core:jackson-annotations:jar:2.12.5`
- `com.fasterxml.jackson.core:jackson-core:jar:2.12.5`
- `com.fasterxml.jackson.core:jackson-databind:jar:2.12.5`
- `com.fasterxml.woodstox:woodstox-core:jar:6.2.6`
- `com.github.drapostolos:type-parser:jar:0.5.0`
- `com.github.jai-imageio:jai-imageio-core:jar:1.4.0`
- `com.github.jai-imageio:jai-imageio-jpeg2000:jar:1.3.1_CODICE_3`

- com.github.jknack:handlebars:jar:2.0.0
- com.github.lookfirst:sardine:jar:5.7
- com.github.luben:zstd-jni:jar:1.4.9-1
- com.github.openjson:openjson:jar:1.0.12
- com.google.code.findbugs:jsr305:jar:3.0.2
- com.google.code.gson:gson:jar:2.8.5
- com.google.crypto.tink:tink:jar:1.4.0
- com.google.guava:guava:jar:29.0-jre
- com.google.http-client:google-http-client:jar:1.22.0
- com.google.protobuf:protobuf-java:jar:3.12.4
- com.googlecode.json-simple:json-simple:jar:1.1.1
- com.googlecode.owasp-java-html-sanitizer:owasp-java-html-sanitizer:jar:20191001.1
- com.jhlabs:filters:jar:2.0.235-1
- com.mchange:c3p0:jar:0.9.5.5
- com.nimbusds:lang-tag:jar:1.4.4
- com.nimbusds:nimbus-jose-jwt:jar:8.14.1
- com.nimbusds:oauth2-oidc-sdk:jar:8.3
- com.rometools:rome-utils:jar:1.9.0
- com.rometools:rome:jar:1.9.0
- com.sparkjava:spark-core:jar:2.9.2
- com.thoughtworks.xstream:xstream:jar:1.4.18
- com.unboundid:unboundid-ldapsdk:jar:4.0.14
- com.xebialabs.restito:restito:jar:0.9.4
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# 4. Hardening Checklist

The following list enumerates the required mitigations needed for hardening. It is not intended to be a step-by-step procedure. To harden a new system, perform configuration as documented.

- ☐ Configure Auditing
- ☐ Set Directory Permissions
- ☐ Configure Keystore and Certificates
- ☐ Disallow Login Without Certificates
- ☐ Configure Certificate Revocation
  - ☐ Deny Guest User Access (if denying Guest users)
  - ☐ Allow Guest User Access (if allowing Guest users)
- ☐ Configure Guest Claim Attributes (if allowing Guest users)
- ☐ Configure Guest User Authentication
- ☐ Create unique user role
- ☐ Restricting Access to Admin Console
- ☐ Restricting Access to Features, Apps, Services, and Configurations
- ☐ Remove Default Users
- ☐ Harden Solr
- ☐ Environment Hardening

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