

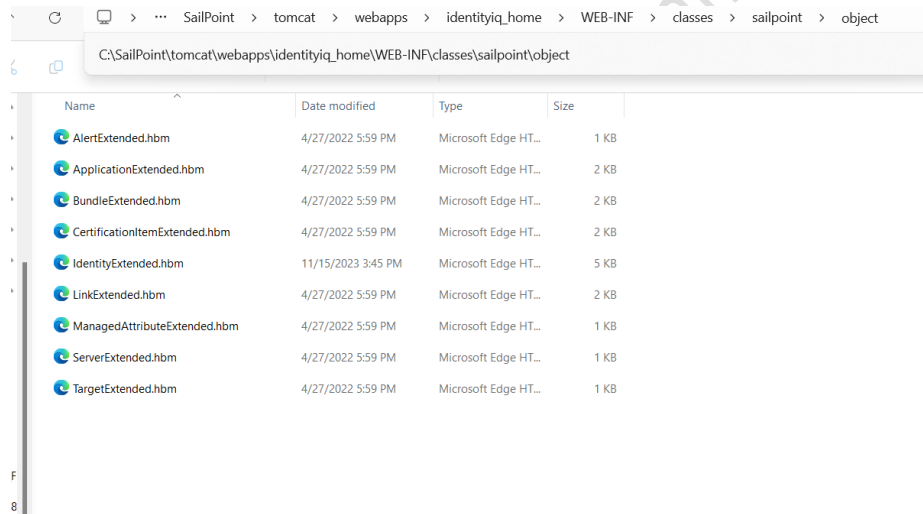
## Extended Attribute Configuration in SailPoint IIQ

IdentityIQ supports adding installation-specific searchable extended attributes on *Identities* and several other system objects like *Link*, *Bundle*, *Application*, *ManagedAttribute*, and *CertificationItem*.

### Configuration Steps:

Step 1: **Update the Hibernate mapping file** with the extended attribute details for the specific object type.

Separate Hibernate mapping files exist for each object type and they will be available in the *[IdentityIQ installation directory]/WEB-INF/classes/sailpoint/object* directory and are called *[object]Extended.hbm.xml*.



Name	Date modified	Type	Size
AlertExtended.hbm	4/27/2022 5:59 PM	Microsoft Edge HT...	1 KB
ApplicationExtended.hbm	4/27/2022 5:59 PM	Microsoft Edge HT...	2 KB
BundleExtended.hbm	4/27/2022 5:59 PM	Microsoft Edge HT...	2 KB
CertificationItemExtended.hbm	4/27/2022 5:59 PM	Microsoft Edge HT...	2 KB
IdentityExtended.hbm	11/15/2023 3:45 PM	Microsoft Edge HT...	5 KB
LinkExtended.hbm	4/27/2022 5:59 PM	Microsoft Edge HT...	2 KB
ManagedAttributeExtended.hbm	4/27/2022 5:59 PM	Microsoft Edge HT...	1 KB
ServerExtended.hbm	4/27/2022 5:59 PM	Microsoft Edge HT...	1 KB
TargetExtended.hbm	4/27/2022 5:59 PM	Microsoft Edge HT...	1 KB

As example, going to add a searchable extended attribute for the Identity object in Windows System.

Open the **identityExtended.hbm** and update the extended attribute name as below for reference

Note: use `access="sailpoint.persistence.ExtendedPropertyAccessor"` when adding the extended attribute beyond the limit of 20.

```
<property name="dateofjoining" type="string" length="450"  
    access="sailpoint.persistence.ExtendedPropertyAccessor"  
    index="spt_identity_dateofjoining_ci"/>
```

```

40
41 MySQL will only index 767 "bytes" by default for InnoDB tables.
42 Using varchar with UTF-8, this equates to at most 255 characters.
43 MySQL will allow indexing a subset of the column length,
44 so generated ddl will have mysql indexes substringed to 255 by default.
45
46
47
48 <property name="extended1" type="string" length="450"
49         index="spt_identity_extended1_ci"/>
50 <property name="extended2" type="string" length="450"
51         index="spt_identity_extended2_ci"/>
52 <property name="extended3" type="string" length="450"
53         index="spt_identity_extended3_ci"/>
54 <property name="extended4" type="string" length="450"
55         index="spt_identity_extended4_ci"/>
56 <property name="extended5" type="string" length="450"
57         index="spt_identity_extended5_ci"/>
58
59 <property name="extended6" type="string" length="450"/>
60 <property name="extended7" type="string" length="450"/>
61 <property name="extended8" type="string" length="450"/>
62 <property name="extended9" type="string" length="450"/>
63 <property name="extended10" type="string" length="450"/>
64 <property name="extended11" type="string" length="450"/>
65
66 <property name="dateofjoining" type="string" length="450"
67         access="sailpoint.persistence.ExtendedPropertyAccessor"
68         index="spt_identity_dateofjoining_ci"/>
69
70
71 <!-- An example of using ExtendedPropertyAccessor to add
72 attributes beyond the limit of 20 numbered
73 SailPointObject properties and have meaningful names.
74
75 <property name="costCenter" type="string" length="450"
76         access="sailpoint.persistence.ExtendedPropertyAccessor"/>
77
78 -->
79 <!--

```





Step 2. Create the DLL script through the IIQ schema(*IdentityIQ installation directory*)/WEB-INF/bin) and run the script in Database to create the column and index in the database table (spt\_identity) for the extended attribute to be created.

```

C:\SailPoint\tomcat\webapps\identityiq_home\WEB-INF\bin>iiq extendedSchema
adding exports for Java 17
Home directory: C:/SailPoint/tomcat/webapps/identityiq_home
Generating database scripts for mysql
Truncating index[spt_identity_extended1_ci] to 255 chars for MYSQL.
Truncating index[spt_identity_extended2_ci] to 255 chars for MYSQL.
Truncating index[spt_identity_extended3_ci] to 255 chars for MYSQL.
Truncating index[spt_identity_extended4_ci] to 255 chars for MYSQL.
Truncating index[spt_identity_extended5_ci] to 255 chars for MYSQL.
Truncating index[spt_link_extended1_ci] to 255 chars for MYSQL.
Truncating index[spt_app_extended1_ci] to 255 chars for MYSQL.
Truncating index[spt_bundle_extended1_ci] to 255 chars for MYSQL.
Truncating index[spt_managed_attr_extended1_ci] to 255 chars for MYSQL.
Truncating index[spt_managed_attr_extended2_ci] to 255 chars for MYSQL.
Truncating index[spt_managed_attr_extended3_ci] to 255 chars for MYSQL.
Truncating index[spt_certitem_extended1_ci] to 255 chars for MYSQL.
Generating database scripts for oracle
Generating database scripts for sqlserver
Generating database scripts for db2

```

After the DLL script generated the files will be updated in the below path  
**C:\SailPoint\tomcat\webapps\identityiq\_home\WEB-INF\database**

 add_identityiq_extensions.db2	11/15/2023 4:45 PM	DB2 File	17 KB
 add_identityiq_extensions.mysql	11/15/2023 4:45 PM	MYSQL File	4 KB
 add_identityiq_extensions.oracle	11/15/2023 4:45 PM	ORACLE File	5 KB
 add_identityiq_extensions.sqlserver	11/15/2023 4:45 PM	SQLSERVER File	5 KB

In two ways we can update the Database table (You can choose any one way to update):

1. Directly from database Workbench, we can execute the below queries created in the DLL script(add\_identityiq\_extensions.mysql) for the extended attribute which needs to be created.

```
alter table identityiq.spt_identity add dateofjoining varchar(450);
create index spt_identity_dateofjoining_ci on identityiq.spt_identity (dateofjoining(255));
```

(or)

2. Login to the SQL command line and execute the below command

**mysql> source <path of the file>add\_identityiq\_extensions.mysql**

Note: To validate whether the column and index properly updated in the table.

Before running the script:

Extended Attribute(dateofjoining) column not exist in the spt\_identity table

```
6 • desc spt_identity;
7
```

Result Grid						
Filter Rows:		Export:		Wrap Cell Content:		
Field	Type	Null	Key	Default	Extra	
owner	varchar(32)	YES	MUL	NULL		
assigned_scope	varchar(32)	YES	MUL	NULL		
extended_identity1	varchar(32)	YES	MUL	NULL		
extended_identity2	varchar(32)	YES	MUL	NULL		
extended_identity3	varchar(32)	YES	MUL	NULL		
extended_identity4	varchar(32)	YES	MUL	NULL		
extended_identity5	varchar(32)	YES	MUL	NULL		
manager	varchar(32)	YES	MUL	NULL		
administrator	varchar(32)	YES	MUL	NULL		
scorecard	varchar(32)	YES	MUL	NULL		
uipreferences	varchar(32)	YES	MUL	NULL		
extended11	varchar(450)	YES		NULL		

After executing the script in the database: The column and index updated for the extended attribute(dateofjoining)

```
mysql> source C:\SailPoint\tomcat\webapps\identityiq_home\WEB-INF\database\add_identityiq_extensions.mysql
Database changed
ERROR 1060 (42S21): Duplicate column name 'extended1'
ERROR 1061 (42000): Duplicate key name 'spt_identity_extended1_ci'
ERROR 1060 (42S21): Duplicate column name 'extended2'
ERROR 1061 (42000): Duplicate key name 'spt_identity_extended2_ci'
ERROR 1060 (42S21): Duplicate column name 'extended3'
ERROR 1061 (42000): Duplicate key name 'spt_identity_extended3_ci'
ERROR 1060 (42S21): Duplicate column name 'extended4'
ERROR 1061 (42000): Duplicate key name 'spt_identity_extended4_ci'
ERROR 1060 (42S21): Duplicate column name 'extended5'
ERROR 1061 (42000): Duplicate key name 'spt_identity_extended5_ci'
ERROR 1060 (42S21): Duplicate column name 'extended6'
ERROR 1060 (42S21): Duplicate column name 'extended7'
ERROR 1060 (42S21): Duplicate column name 'extended8'
ERROR 1060 (42S21): Duplicate column name 'extended9'
ERROR 1060 (42S21): Duplicate column name 'extended10'
ERROR 1060 (42S21): Duplicate column name 'extended11'
Query OK, 0 rows affected (0.44 sec)
Records: 0 Duplicates: 0 Warnings: 0

Query OK, 0 rows affected (0.44 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

```
6 • desc spt_identity;
7
```

Field	Type	Null	Key	Default	Extra
assigned_scope	varchar(32)	YES	MUL	NULL	
extended_identity1	varchar(32)	YES	MUL	NULL	
extended_identity2	varchar(32)	YES	MUL	NULL	
extended_identity3	varchar(32)	YES	MUL	NULL	
extended_identity4	varchar(32)	YES	MUL	NULL	
extended_identity5	varchar(32)	YES	MUL	NULL	
manager	varchar(32)	YES	MUL	NULL	
administrator	varchar(32)	YES	MUL	NULL	
scorecard	varchar(32)	YES	MUL	NULL	
uipreferences	varchar(32)	YES	MUL	NULL	
extended11	varchar(450)	YES	MUL	NULL	
dateofjoining	varchar(450)	YES	MUL	NULL	

Step 3. Configure the Extended Attribute in the global setting → Identity Mappings in SailPoint UI.

HomeMy WorkIdentitiesApplicationsIntelligenceSetup

Global Settings

IdentityIQ Configuration

Configure various system-wide settings.

Forms

Configure forms for workflows, role provisioning policies, and application provisioning policies in IdentityIQ.

Logon Configuration

Configure IdentityIQ login settings and security questions.

Role Configuration

Configure role types and extensible attributes.

Identity Mappings

Configure the identities that are managed by IdentityIQ.

Scopes

Configure scoping in IdentityIQ.

Account Mappings

Configure the accounts that are managed by IdentityIQ.

Time Periods

Configure the time periods used for searching.

Rapid Setup Configuration

Configure Rapid Setup in IdentityIQ.

Audit Configuration

Configure the auditing of system operations.

Application Attributes

Configure the extensible attributes for applications.

Electronic Signatures

Configure electronic signatures and the displayed meanings in IdentityIQ.

Entitlement Catalog Attributes

Configure the extensible attributes for entitlements in the catalog.

API Authentication

Configure OAuth 2.0 clients for authentication.

Quicklink Populations

Configure the Quicklink Populations in IdentityIQ.

Import from File

Import an XML file containing system objects or a CSV file of localized attributes for system objects.

Global SettingsLifecycle ManagerCompliance ManagerAdministrator ConsolePlugins

Below Error will occur before configuring the created extended attribute in the Identity mapping.

#### Identity Attributes

IdentityExtended.hbm.xml property dateofjoining is not defined in ObjectConfigIdentity

Attribute	Primary Source Mapping	Advanced Options
Administrator		
Country		Searchable
Date of Leaving		Searchable
Department Name		Searchable

Open the Identity mapping → select Add New Attribute and update the extended Attribute created in the HBM file and database. Enable the searchable flag so that this attribute can be used in filters, rules etc as a searchable attribute.

#### Edit Identity Attribute

Specify the applications and rules from which identity data is derived. Select a source mapping to change its position within the list.

Identity Attribute

Attribute Name\*  
dateofjoining

Display Name  
Date of Joining

Advanced Options

Attribute Type  
String

Exit Mode  
Final Only

Searchable  
☒

Multi-Valued  
☐

Group Factory  
☐

Value Change Rule  
Select Rule

Value Change Workflow  
Select Business Process

Sync with Workflow  
☐

Source Mappings

Add Source Delete Sources

Target Mappings

Attribute Transformation Rule Provision All Accounts

Add Target Delete Targets

Save Cancel

After saving the configuration you can verify this extended attribute will be shown under searchable attribute in advanced analytics. This confirms the extended attribute we created is searchable and we can use this in various rule, configurations, filters etc.,

#### Advanced Analytics

Search Type Identity

Advanced Search

Search Criteria

Identity Attributes

Standard Attributes

Last Name

First Name

Username

Display Name

Email

Manager

Is Inactive

Is Manager

Type

Software Version

Administrator

Applications

Searchable Attributes

Employee Type

HR ID

Termination Date

Role

Department Name

Country

Location

Date of Leaving

VF ROOT

AMMAccountName

Date of Joining

Detected Role

Fields to Display

Identity Fields

☐ Administrator

☐ Applications

☐ Assigned Roles

☐ Country

☐ Date of Joining

☐ Date of Leaving

☐ Department Name

☐ Detected Roles

☐ Display Name

☐ Email

☐ Employee Type

☐ First Name

☐ HR ID

☐ Last Name

☐ Location

☐ Manager

☐ Role

☐ AMMAccountName

Note: The Global Configuration for various object needs to be configured in the below UI object mappings

- Identity Mappings for Identity attributes
- Account Mappings for Link attributes
- Application Attributes for extended Application attributes
- Role Configuration for Bundle attributes
- Entitlement Catalog Attributes for ManagedAttribute extended attributes

Reference: <https://community.sailpoint.com/t5/Technical-White-Papers/Managing-Extended-Attributes/ta-p/77088>