Technical Reference

Collected Data Transformations

Contents

Introduction

This technical reference explains how to use collected data is transformed from the source and applied to Identity Governance.

Collected Data Transformations

In real-world environments there is a need to perform transformations of collected data. The data format, field lengths, schema, etc. can vary greatly between applications from different vendors or from different locales. Finally, all of this collected data must be collected into Identity Governance. To address these challenges, the Identity Governance data collection service provides the ability to apply powerful ECMAScript transformations to any data field in any collector. Many common transformations exist in the default collector templates.

There are three basic transformation types and one object transformation type:

- Data format transformation
- Data parsing transformation
- Data joining transformation
- Object exclusion transformation

Data Format Transformation

This type of transformation is a conversion of a data source date format “20150927” into the Java Date milliseconds format “1410580800000” expected by the Identity Governance product. Examples of this type of transformation is the `SF_Date_UTCSeconds` transform in the *Salesforce Account* application template.

Data Parsing Transformation

This type of transformation is the conversion of a data source *fullName* field into the first and last name fields in Identity Governance.

Data Joining Transformation

This type of transformation is a combination of multiple data source fields: *firstName*, *initial*, and *lastName* into the Identity Governance `accountId` attribute.

Object Exclusion Transformation

There may be scenarios in which you will wish to exclude objects from a collection based on certain attribute values on the collected object. For example, you may wish to remove all Users that are flagged inactive from the collected results. A special keyword may be set as the output value of a transformation that will instruct Identity Governance to remove the object.

Transformation Implementation

Transformation scripts may be added to any mapped data field in any data collector by clicking on the ‘**{}**’ icon next to the field mapping. This will expand the dialog to allow you to either upload a transformation file or paste in transformation text. The critical thing to remember is that the input to all transformations is *inputValue* and the output is *outputValue*.

Data Format Transformation Examples

Salesforce Date Transform

```
var yearStr=inputValue.substring(0,4);
var month=inputValue.substring(5,7)-1;
var day = inputValue.substring(8,10);
var hour=inputValue.substring(11,13);
var minute=inputValue.substring(14,16);
var second=inputValue.substring(17,19);


var newdate = new Date(Date.UTC(yearStr,month,day,hour,minute,second));
finalDate = newdate.getTime().toString();
outputValue=finalDate;
```

Active Directory Disabled Flag Transform

```
var disabled = inputValue&2;
if (disabled==0) {
  outputValue='false'
} else {
  outputValue='true'
}
```

Data Parsing Transformation Examples

Full Name to First Name Transform

```
var fullSplit = inputValue.split(' ');
outputValue = fullSplit[0];
```

Full Name to Last Name Transform

```
var fullSplit = inputValue.split(' ');
outputValue = fullSplit[1];
```

Data Joining Transformation Examples

This type of collection and transformation is utilized by the Active Directory account collector to obtain.

Data Join transformations require multiple attributes and their values to be provided from the data source. To implement this, the collector field mapping must utilize a JSONArray format to specify the desired attributes. The collected data will be returned in a JSONObject format which will be passed to the transformation. Depending on the Identity Governance attribute being processed, the transformation may combine the data values into a single value or parse them into a multi-valued array.

Full Name Generator Transform (multiple attribute values into one attribute result)

Attribute mapping: `[“first_name”, “last_name”]`

```
var jObject = JSON.parse(inputValue);
var fName = jObject.first_name;
var lName = jObject.last_name;
outputValue = lName.concat(', ').concat(fName);
```

Active Directory Alias Transform (Multiple attribute values into multi-value result)

Attribute mapping: `["userPrincipalName","distinguishedName","sAMAccountName","objectGUID"]`

```
var jObject = JSON.parse(inputValue);
var aliasArray = [];
if ((jObject.userPrincipalName !== undefined) && (jObject.userPrincipalName.length > 0))
{
  aliasArray.push(jObject.userPrincipalName);
}
if ((jObject.sAMAccountName !== undefined) && (jObject.sAMAccountName.length > 0)) {
  aliasArray.push(jObject.sAMAccountName);
}
if ((jObject.distinguishedName !== undefined) && (jObject.distinguishedName.length > 0))
{
  aliasArray.push(jObject.distinguishedName);
}
if ((jObject.objectGUID !== undefined) && (jObject.objectGUID.length > 0)) {
  aliasArray.push(jObject.objectGUID);
}
outputValue = JSON.stringify(aliasArray);
```

Object Exclusion Transformation

When the output value of a field transformation is “DELETE_OBJECT”, The Identity Governance data collection service will discard the entire object with which the value is associated. This functionality is useful for removing unwanted objects from a collector result set.

Remove Parent Group with no Child Groups (Identity “grouptogroup” collector)

```
var jObject = JSON.parse(inputValue);
if ((jObject.groupMember == undefined) || (jObject.groupMember.length == 0)) {
  outputValue = 'DELETE_OBJECT';
} else {
  outputValue = jObject.groupMember;
}
```

Remove Inactive Accounts

```
var jObject = JSON.parse(inputValue);
if (inputValue == ‘inactive’) {
  outputValue = 'DELETE_OBJECT';
} else {
  outputValue = inputValue;
}
```

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