

EXACT IDENTITY

Training

Self Paced Module 1

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Section 1

Concepts

Note: The training document makes reference to the XID user manual. The user manual pdf has been saved with bookmarks that reference the table of contents (toc). The toc is referenced throughout the training guide and provides detail for information in this training module. Expand bookmarks in the user manual pdf viewer to view the references.

XID Application Concepts

- An XID Project is a representation of a physical Data project that encompasses Entities, Matching & Business Rules.
- An entity is a reference for a repository where an extraction file has been configured for analysis.
- Entity 1 is the primary entity and can also be referenced as an Identity Vault (IDV) if this exists in the architecture. Other entities are secondary entities and are referred to as Application/Connected System entities in XID.
- If there is no designated primary entity in the architecture then entity 1 should be the entity deemed as more authoritative.
- Entity 1 is represented as the central entity in the XID architecture tab.
- Matching rules: Matching is performed from the entity 1 to each secondary entity selected for analysis.
 - User manual sections (UMS): XID Architecture -> Match | New Project Workshop -> Set Matching Rules.
- The business rules allow comparison of entities at an attribute/field level.
 - Attribute(s) may be used as a global reference to attributes and fields.
 - User manual sections (UMS): XID Architecture -> Business Rules Schema Map | New Project Workshop -> Set Business Rules.

XID Application Concepts

- XID is designed to analyze data at a fixed point in time. This is achieved by gathering extracts of data in LDIF, CSV or XML formats and creating a model of the production system.
- As data issues (once located) cannot be rectified in real time, there is limited benefit from reading or extracting the data in real time. A reasonably current extract is sufficient in data rectification when applying the concept of data rendering.
- Data rendering looks at a snapshot in time and attempts to rectify at least 80% of issues in the first error detection/rectification pass that may take weeks, depending upon the clients' inertia in changing production data.
- The 2nd and subsequent renders should work on a smaller error pool until an error level is reached that the project or infrastructure can accept. The remaining errors can be handled as exceptions.
- XID also remains abstracted from production systems for the following reasons:
 - Complexity in obtaining account(s) to access data directly.
 - Difficulty in obtaining the appropriate authorisation level to extract all relevant data.
 - Live data changes during processing can create a variant in the result set.
 - Potential performance and/or operational impact to live systems upon extraction.
 - XID processes an agreed data set sanctioned by the data owner.



XID Entity Input Files

- XID processes CSV, LDIF and XML Input Files.
- Input Files are an extraction of data from an entity such as Microsoft (MS) Active Directory, Novell eDirectory, LDAP (Lightweight Directory Access Protocol) e.g. SunONE, Oracle Database, MS SQL, MySQL and SAP.
- Input Files are copied to the same folder location as the XID application (xid.exe)
 - Module 2 deals with input files located in a different location to the application. The XID project and Entity 'Detect' will remain at 'AUTO' for this training module.
- **Sample Input Files:** (Some entities have multiple extract file versions that are used in later modules)

Entity	Input Type	Filename
SAP	CSV	xtcosap.csv
AD	CSV	xtcoad.csv
LDAP	LDIF	xtcoldap.ldif
JDBC	XML	xtcojdbc.xml
eDir	LDIF	xtcoidvault.ldif

XID Entity Input Files - CSV **EXACT IDENTITY**

- A comma-separated values (CSV) file stores tabular data (numbers and text) in plain-text form:
- XID has settings to define parameters of the CSV file.
- CSV File.
 - Line termination: Carriage Return Line Feed (CRLF) or Line Feed (LF).
 - CSV delimiter: Used to define attributes/fields in a row.
 - Header Row: Optional in a CSV file.
 - Optionally Enclosed Quotes: XID will process the CSV row with the expectation that one or all of the columns may be enclosed by double quotes “.”. The quotes allow encapsulation of column data that may contain delimiter characters.
- AD CSV sample.

Header Row

```
dn,sAMAccountName,sAMAccountType,givenName,middleName,sn,displayName,initials,manager,employeeID,em  
"cn=SmithJ,ou=HR,ou=Paris,ou=FR,DC=xidtestco,DC=com",SmithJ,805306368,James,null,Smith,James Smith,r  
"cn=JohnsonJ,ou=Drafting,ou=Seattle,ou=US,DC=xidtestco,DC=com",JohnsonJ,805306368,John,null,Johnson,  
"cn=WilliamsM,ou=Drafting,ou=New York,ou=US,DC=xidtestco,DC=com"WilliamsM,805306368,Mary,null,Willi
```

Attr/Field with optionally enclosed quotes CSV delimiter

XID Entity Input Files - LDIF

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- LDAP Data Interchange Format (LDIF) Files:
 - Each content record is represented as a group of attributes with records separated from one another by blank lines.
 - Individual attributes of a record are represented as single logical lines (represented as one or more multiple physical lines via a line-folding mechanism), comprising "name: value" pairs.
 - Non ASCII value data are marked with '::' after the attribute name and encoded into ASCII using base64 encoding.
 - Object specified by unique distinguished name (dn) reference.

- LDIF sample.

```
dn: cn=SmithJ,ou=Paris,ou=FR,o=xidtestco↓ — Object DN
givenName: James↓ — name: value pair
sn: Smith↓
fullName: James Smith↓
uid: 10000001↓
ou: HR↓
l: Große Gallusstraße 10-14↓
mail: James.Smith@xidtestco.com↓
telephoneNumber:: ICs2NTY0MjM3Mjg2↓ — base64 name:: value pair
```


XID Entity Input Files - XML **EXACT IDENTITY**

- XML Files:

- Extensible Markup Language (XML) is a markup language that defines a set of rules for encoding documents in a format that is both human-readable and machine-readable.
- Markup and content: The characters making up an XML document are divided into markup and content. Strings of characters that are not markup are content.
- Tag: A markup construct that begins with < and ends with >. Tag types include start-tags; e.g. <section>, end-tags; e.g. </section> & empty-element tags; e.g. <line-break />
- Element: A logical document component which begins with a start-tag and ends with a matching end-tag. The element's content may contain markup, including other elements, which are called child elements.
- The XML Headers define the encapsulating elements for the user object and identity record. Not all of the elements have to be configured but the common element that directly encapsulates the user class fields must be.

- XML sample. ->

```
<?xml version="1.0" standalone="yes" ?>↓
<User>↓
<Record>↓ — Data encapsulation element
<EmployeeNumber>10000001</EmployeeNumber>↓
<LoginName>SmithJ</LoginName>↓ — Start/End Tag
<FirstName>James</FirstName>↓ — XML content (field data)
<LastName>Smith</LastName>↓
<Location>Paris</Location>↓
<Department>HR</Department>↓
<Title>Line Manager</Title>↓
<EmailAddress>James.Smith@xidtestco.com</EmailAddress>↓
<PhoneNumber>33110102</PhoneNumber>↓
<Mobile>33120103</Mobile>↓
<AccountStatus>Active</AccountStatus>↓
</Record>↓ — encapsulation closing tag
<Record>↓
```

Record element

XML content (field data)

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Section 2

Create New Project with 2 Entities



Lab Requirement

- Download XID application software.
 - www.automation.co.nz/download/xid.zip
 - ZIP decryption password to be provided.
- User Manual. Available with XID download.
 - ‘XID User Manual.pdf’.
 - Throughout this module there are page references to the user manual where detailed step by step instructions are provided.
- Training Guide. This guide available with XID download.
 - ‘XID_training.pdf’.




XID application (Prod)

- Unzip XID.ZIP to a Windows file directory of your choice.
 - Subdirectories 'output', 'output\xrecycle' and 'image' must be maintained.
 - Report results in the 'output' subdirectory.
 - Windows registry or system libraries are not impacted at all.
- Copy XID by copying the XID folder structure.
- Backup XID by backing up the XID folder structure.
- Run XID.
 - *xid.exe*
 - XID will detect the folder where it is run from.



New Project

- Objective: Create an XID Project. [UMS: New Project Workshop](#).
 - A new project will be created comprising 4 entities in total with SAP being primary entity 1.
 - The input files are stored in the XID folder and are prefixed 'xtco'.
- Create New Project.
 - Click the 'File' menu and select 'New'.
 - Complete information as per the manual: (The SI field is optional and blank in this example)
 - Customer: XID Test Co
 - Project No: 2
 - Project Name: XID SAP AD
 - Path: Auto
 - Output File Delimiter: , (Window List Separator setting). Note: Enter '#9' without quotes for a 'tab' delimiter.
 - **Important:** Please do not change the path information as this is what XID detects for the target configuration and it will be different to the training materials. This is expected.
 - Click 'OK' to save and close the Create Project Window.
- Save the Project.
 - Click 'File' then 'Save' or click the save icon from the toolbar. 

New Entity

- Objective: Create New Entities.
 - UMS: New Project Workshop -> Create New Entities.
- Create New Entity 1.
 - Click the 'Project1-Match' tab.
 - Select 'SAP' from the entity 1 combo box.
 - Set the entity name to 'SAP2b'
- Create New Entity 2.
 - Select 'AD' from the entity 2 combo box.
 - Set the entity name to 'AD2b'.
- Save the Project.
 - Click the 'Save' icon or click 'File' then select 'Save'.
 - Click 'OK' to close the 'Project Saved!' message box.
- Click the 'Project1-Architect' tab to view the entities.

Edit Entity – SAP

- Objective: Configure entity SAP file info.
 - UMS: New Project Workshop -> Entity Configuration: SAP.
 - *Reference to the User manual is recommend for this section.*
 - Click the 'Project1-Match' tab.
 - Click the 'SAP' icon to access the entity configuration.
- SAP File Info. (Input)
 - Detect: Auto
 - Line Term: CRLF
 - Input File: 'xtcosapb.csv'.
 - Input Type: CSV
 - CSV delim: , (Enter the comma character)
 - Header Row: Y
 - Enclosed Quotes: Y

Edit Entity – SAP

- Objective: Configure entity SAP schema. [UMS: New Project Workshop -> Entity Configuration: SAP -> SAP CSV Schema](#). *User manual reference is recommended for this section.*
- SAP Schema. ‘_sch.xml’ suffix.
 - The Schema File edit box contains the name of the schema file.
 - CSV: Attribute list must follow the CSV attribute column order.
 - Attribute Names are not important but it is best that they are representative of the attribute.

Edit Entity - SAP

- SAP Schema.

- Follow the instructions ‘[New Project Workshop -> Entity Configuration: SAP -> SAP CSV Schema](#)’ of the user manual to add SAP schema attributes.
- Schema attribute entry notes:
 - Attribute order must be exact. Attributes can be moved if the correct position is not configured initially.
 - Special tags inform XID about the function of an attribute. This is required as not every schema is the same. See user manual appendix for special value descriptions.

Attribute/Field		Attr type	Single/Multi valued	Length	Special
Employee Number		CIS	SV	25	UID
First Name		CIS	SV	40	GN
Middle Name		CIS	SV	40	
Last Name		CIS	SV	40	SN
Org Unit		CIS	SV	50	DEPT
Location		CIS	SV	80	LOCN
Position Title		CIS	SV	80	
Email Address		CIS	SV	128	MAIL
Employment Status		CIS	SV	12	
TEL_NUMBER		CIS	SV	20	TEL
MOB_NUMBER		CIS	SV	20	TEL

Edit Entity - SAP

- **Account Control.** [UMS: New Project Workshop -> Entity Configuration: SAP -> Account Control.](#)
 - Account control is optional and sets the active value for an account. XID can report on discrepancies between entities.
 - It is recommended to follow the detailed instructions in the user manual for setting account control.
 - Active account field & value:
 - 'Employment Status' -> 'Active'.
- Click 'OK' to save the entity configuration.
 - Entity configuration is not saved permanently until the project is saved.
- Save the project.

Edit Entity - AD

- Objective: Configure entity AD file info.
- UMS: New Project Workshop -> Entity Configuration: AD.
 - Click the 'Project1-Match' tab.
 - Click the 'SAP' icon to access the entity configuration.
- AD File Info. (Input)
 - Detect: Auto
 - Line Term: CRLF
 - Input File: 'xtcoadb.csv'
 - Input Type: CSV
 - CSV delim: ,
 - Header Row: Y
 - Enclosed Quotes: Y

Edit Entity - AD

- Objective: Configure entity AD schema.
 - UMS: New Project Workshop -> Entity Configuration: AD -> AD CSV Schema & UMS: Schema Templates for template instructions.
- AD Schema. ‘_sch.xml’ suffix.
 - With the AD schema it is recommended to follow the schema template implementation instructions. UMS: Schema Templates.

Edit Entity - AD

- AD Schema

Attribute/Field		Attr type	Single/Multi valued	Length	Special
dn		DN	SV	128	DN
sAMAccountName		CIS	SV	80	ACCNT
sAMAccountType		CIS	SV	20	
givenName		CIS	SV	40	GN
middleName		CIS	SV	40	
sn		CIS	SV	40	SN
displayName		CIS	SV	80	
initials		CIS	SV	12	X
manager		CIS	SV	80	
employeeID		CIS	SV	25	UID
employeeNumber		CIS	SV	12	
l		CIS	SV	50	LOCN
title		CIS	SV	50	
Department		CIS	SV	40	DEPT
mail		CIS	SV	125	MAIL
userPrincipalName		CIS	SV	125	
telephoneNumber		CIS	SV	25	TEL
Mobile		CIS	SV	25	TEL
cn		CIS	SV	80	
name		CIS	SV	80	
userAccountControl		CIS	SV	25	
lastLogon		CIS	SV	25	X
lastLogonTimestamp		CIS	SV	25	X
homeDirectory		CIS	SV	125	X
profilePath		CIS	SV	125	X

Edit Entity - AD

- **Account Control.** UMS: New Project Workshop -> Entity Configuration:
AD -> Account Control.
 - Account control is optional and sets the active value for an account. XID can report on discrepancies between entities.
 - It is recommended to follow the detailed instructions in the user manual for setting account control.
 - Active account attribute & value.
 - 'userAccountControl' -> '512'.
- Click 'OK' to save the entity configuration.
 - Entity configuration is not saved permanently until the project is saved.
- Save the project.

Matching Rules

- Objective: Configure matching rules. [UMS: New Project Workshop -> Set Matching Rules](#).
- Attributes are configured for the purposes of matching identity objects between entities.
- The 'Project1-Match' tab combo boxes are populated once the entity schema is configured.
 - The matching rules between entity 1 and 2 are configured on the entity 2 matching rule row. Entity 1 matching rules are reserved for loop back.
 - Configure SAP->AD entity matching rule:
 - Set entity 1 (IDV) combo box to 'Employee Number'.
 - Set entity 2 (Application) combo box to 'employeeID'.
- Save the project.
- *Note: Three matching rules can be configured per entity using the 'Match' button.*
- [User manual sections: \(UMS\) XID Architecture -> Match](#) has further detail regarding matching rules.

Business Rules

- Objective: Configure business rules.
 - UMS: New Project Workshop -> Set Business Rules.
 - Business Rules define relationships between entities at a field/attribute level.
 - At least one rule has to be configured to a maximum of 30 rules.
 - Configure essential rules only.
- Click the '2. IDV – *entity_Schema*' tab where *entity* is the type specified at entity position 2 which is AD.

Business Rules

- **SAP->AD Business rules.** [UMS: New Project Workshop -> Set Business Rules..](#)
 - The training module will only configure 5 rules. Not all rules in the schema have to be configured.
- Follow the process in the user manual to configure the rules in the table below.
- Entity 1 attributes are located under IDV and entity 2 attributes under Application.
- The following rules will be configured for this training module.

Entity 1 (IDV)	Entity 2 (Application)	Subscribe Entity 1 to Entity 2	Publish Entity 2 to Entity 1	Merge Authority
First Name	givenName	Sync	ignore	IDV
Last Name	sn	sync	ignore	IDV
Position Title	title	sync	ignore	IDV
TEL_NUMBER	telephoneNumber	sync	sync	IDV
MOB_NUMBER	mobile	sync	sync	IDV

- **Save the project.**
- User manual sections: [\(UMS\) XID Architecture -> Business Rules Schema Map](#)
has further detail regarding business rules.

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Section 3

Reporting and Encryption Key processing

Report

- Objective: Execute new Project report.
 - User Manual Section (UMS): New Project Report.
- Click the 'Project1-Architect' tab.
- Select the 'SAP' and 'AD' entities by clicking the entity icons.
- Click the 'Report' menu and select 'Run'.
 - An entity load error usually indicates an issue with the entity configuration. The appendix has a troubleshooting section.
- Click the 'Report' menu then click 'Show Summary' to view the summary report.

Report Summary Report

XID Reports

Summary Report 2:XID SAP AD

Matching and Orphans		IDV to Entity (E) -> <- Entity (E) to IDV				
Entity	Accounts	In scope	Match->	Orphan->	<-Match	<-Orphan
SAP2b	56	56				
AD2b	54	54	54	2	54	0

Business Rules - IDV to Entity -> matched

Entity	Description	Issues	Accounts Impacted
SAP2b	SAP2b core data overwrite by AD2b	0	
AD2b	AD2b core data overwrite by SAP2b	37	
Totals	->	37	19

General

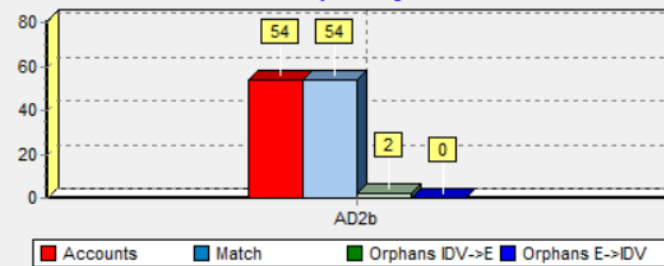
Entity	Account Control Discrepancy	Impacted	Detailed Items
AD2b	Active in SAP2b but inactive in AD2b	1	1

Discrepancy Totals

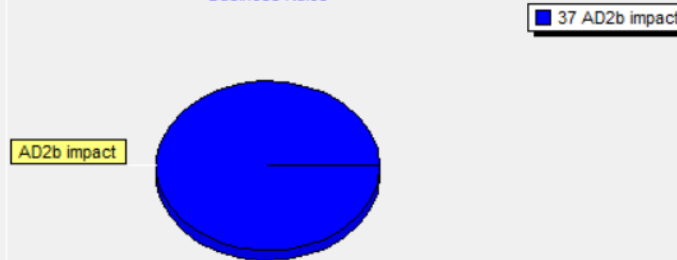
Report Section	Description	Sub Total	Detailed Total
System Matching	Orphan accounts: IDV -> Entity	2	2
System Matching	Orphan accounts: Entity -> IDV	0	0
Business Rules	Data Flow	37	37
General	Account Control	1	1

p:150508085736 Totals - Issues: 40 Detailed Report: 40

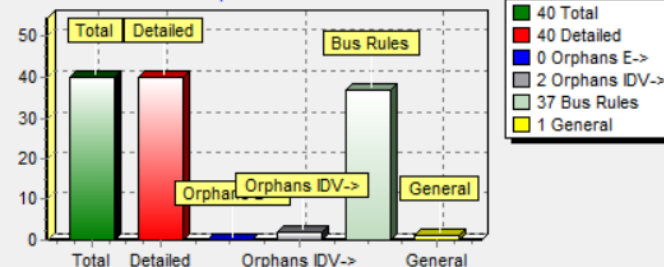
Entity Matching



Business Rules



Report Totals



Save

Print

OK

Cancel

Encryption Key Processing

- Generate XID Key. [UMS: Key Processing -> Generate XID Key](#).
- A key can be generated that will formulate a decryption request for the 'Detailed Report'.
- Click the 'Report' menu and select '1 Generate XID Key'.
 - In the 'XID Key Processing' window, click the 'Generate Key' button.
 - Click the 'Copy Key' button then click 'OK'.
- The detailed report files are saved in the output directory from the XID base directory. The files are comprised of the 'ReportUID' and a suffix that describes the content of the encrypted file.
 - The 'ReportUID' is a combination of the local computer name, computer login name and a unique code that changes for every key generated.

Encryption Key Processing

- Send XID Key. UMS: Key Processing -> Generate XID Key -> Send XID key.
- Open an email client.
 - Set the 'To' email address to support@exactidentity.com
 - Set the 'Subject' to 'XIDKEY'.
- *Optional*: Paste the key into the email body.
- Attach the file '..\output\<ReportUID>_repstats.txt' to the email.
 - A <ReportUID> example is 'DRYOGA2daren150508092248' and the full filename would be 'DRYOGA2daren150508092248_repstats.txt'.
 - Note that the Report UID will change for every key that is generated.
- Send the email.
 - Certain email clients corrupt the XID key and XID unlock key when forwarded. If a key(s) have to be forwarded then it must be copied to a text file (using notepad or similar) then attached to an email.
 - Note that the '<ReportUID>_repstats.txt' contains the encryption key and this file can be forwarded if necessary.

Encryption Key Processing

- Process XID Unlock Key. [UMS: Key Processing -> Process XID Unlock Key](#).
- Open the XID project (if not open already) that corresponds to the report that is being processed. This will always be the last project opened.
- Open the email or document with the XID unlock key and copy the unlock key to the Windows clipboard.
- Click the 'Report' menu and select '2 Process XID Unlock Key'.
 - Click 'Paste Key' to paste the unlock key into the 'Key' edit box.
 - Click 'Unlock Key' to begin the detailed report decryption process.
 - Click 'OK' to complete the decryption.
 - The 'XID Key: unlock key validated' dialog box will be displayed upon successful decryption. Click 'OK' to close the dialog box.
- The detailed report can be viewed in the current XID session by clicking 'Report' and selecting 'Report Detail'.
- The decrypted report files will be available in the output directory. The report name suffix has the '_dcrypt' suffix.
 - Spreadsheet tools should now be used for further analysis of the decrypted files.

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Section 4

LDAP and JDBC entities

New Entity - LDAP

- Objective: Configure additional entity.
 - UMS: New Project Additional Entity: LDAP.
- Create New Entity 3.
 - Click the 'Project1-Match' tab.
 - Select 'LDAP' from the entity 3 combo box.
 - Set the entity name to 'LDAP2b'.
- Save the project.

Edit Entity - LDAP

- Objective: Configure entity LDAP file info. [UMS: New Project](#)
[Additional Entity: LDAP -> Entity Configuration: LDAP.](#)
 - Click the 'Project1-Match' tab.
 - Click the 'LDAP' icon at row 3 to access the entity configuration.
- LDAP File Info. (Input)
 - Detect: Auto
 - Line Term: CRLF
 - Input File: 'xtcoldap.ldif'.
 - Input Type: LDIF.

Edit Entity - LDAP

- Objective: Configure entity LDAP schema.
- LDAP Schema. ‘_sch.xml’ suffix.
 - Refer to the user manual [New Project Additional Entity: LDAP -> Entity Configuration: LDAP -> LDAP Schema & UMS: Schema Templates](#) for template instructions using the AD sample.
 - Use the ‘LDAP2_sch.xml’ template.



Edit Entity - LDAP

- LDAP Schema.

Attribute/Field		Attr type	Single/Multi valued	Length	Special
dn		DN	SV	128	DN
givenName		CIS	SV	40	GN
sn		CIS	SV	40	SN
fullName		CIS	SV	80	FN
uid		CIS	SV	25	UID
ou		CIS	SV	80	DEPT
l		CIS	SV	50	LOCN
mail		CIS	SV	125	MAIL
telephoneNumber		CIS	SV	25	TEL
mobile		CIS	SV	25	TEL
title		CIS	SV	50	
loginDisabled		CIS	SV	25	
cn		CIS	SV	80	ACCNT

Edit Entity - LDAP

- **Account Control.** UMS: New Project Additional Entity: LDAP -> Entity Configuration: LDAP -> Account Control.
 - Account control is optional and sets the active value for an account. XID can report on discrepancies between entities.
 - It is recommended to follow the detailed instructions in the user manual for setting account control.
 - Active account attribute & value.
 - 'loginDisabled' -> 'false'.
- Click 'OK' to save the entity configuration.
 - Entity configuration is not saved permanently until the project is saved.
- Save the project.

Matching Rules

- Objective: Configure matching rules LDAP. UMS: New Project Additional Entity: LDAP -> Entity Configuration: LDAP -> Set Matching Rules.
- Attributes are configured for the purposes of matching identity objects between entities.
- The 'Project1-Match' tab combo boxes are populated once the entity schema is configured.
 - The matching rules between entity 1 and 3 are configured on the entity 3 matching rule row. Entity 1 matching rules are reserved for loop back.
 - Configure SAP->LDAP entity matching rule:
 - Set entity 1 (IDV) combo box to 'Employee Number'.
 - Set entity 3 (Application) combo box to 'uid'.
- Save the project.
- User manual sections: (UMS) XID Architecture -> Match *has further detail regarding matching rules.*

Business Rules

- Objective: Configure business rules for LDAP.
 - UMS: New Project Additional Entity: LDAP -> Entity Configuration: LDAP -> Set Business Rules.
 - Business Rules define relationships between entities at a field/attribute level.
 - At least one rule has to be configured to a maximum of 30 rules.
 - Configure essential rules only.
- Click the '3. IDV – *entity_Schema*' tab where *entity* is the type specified at entity position 3 which is LDAP.

Business Rules

- SAP->LDAP Business rules.
 - The training module will only configure 4 rules. Not all rules in the schema have to be configured.
 - If required; follow the user manual process to configure the rules in the table below.
 - Entity 1 attributes are located under IDV and entity 3 attributes under Application.
 - The following rules will be configured for this training module:

Entity 1 (IDV)	Entity 3 (Application)	Subscribe Entity 1 to Entity 3	Publish Entity 3 to Entity 1	Merge Authority
First Name	givenName	sync	ignore	IDV
Last Name	sn	sync	ignore	IDV
Org Unit	ou	sync	ignore	IDV
Position Title	title	sync	ignore	IDV

- Save the project.
 - User manual sections: (UMS) XID Architecture -> Business Rules Schema Map
has further detail regarding business rules.

New Entity - JDBC

- Objective: Configure additional entity.
 - UMS: New Project Additional Entity: JDBC.
- Create New Entity 4.
 - Click the 'Project1-Match' tab.
 - Select 'JDBC' from the entity 4 combo box.
 - Set the entity name to 'JDBC2b'.
- Save the project.

Edit Entity - JDBC

- Objective: Configure entity JDBC.
- UMS: New Project Additional Entity: JDBC.
 - Click the 'Project1-Match' tab.
 - Click the 'JDBC' icon at row 4 to access the entity configuration.
- JDBC File Info. (Input)
 - Detect: Auto
 - Line Term: CRLF
 - Input File: 'xtcojdbc.xml'.
 - Input Type: XML.



Edit Entity - JDBC

- JDBC File Info - XML. UMS: New Project Additional Entity: JDBC -> Entity Configuration: JDBC -> XML Headers.
- The XML Headers define the encapsulating elements for the user object and identity record.
- Not all encapsulating elements required. At least one is required.

```
<User>
  <Record>
    <EmployeeNumber>10000001</EmployeeNumber>
    .
    .
  </Record>
</User>
```

Edit Entity - JDBC

- Objective: Configure entity JDBC schema.
- UMS: New Project Additional Entity: JDBC -> Entity Configuration: JDBC -> XML Headers.
- JDBC Schema. ‘_sch.xml’ suffix.
- Refer to the user manual [New Project Additional Entity: JDBC -> Entity Configuration: JDBC -> JDBC Schema](#) & UMS: Schema Templates for template instructions using the AD sample.
- Use the ‘JDBC2_sch.xml’ template.



Edit Entity - JDBC

- **JDBC Schema.** UMS: New Project Additional Entity: JDBC -> Entity
Configuration: JDBC -> JDBC Schema.
 - Refer to the user manual [Schema Templates](#) for template instructions using the AD sample. Use the 'JDBC2_sch.xml' template.
 - The schema field/attribute name has to match that of its XML field element counterpart.

Attribute/Field		Attr type	Single/Multi valued	Length	Special
EmployeeName		INT	SV	20	UID
LoginName		CIS	SV	30	ACCNT
FirstName		CIS	SV	40	GN
LastName		CIS	SV	40	SN
Location		CIS	SV	80	LOCN
Department		CIS	SV	80	DEPT
Title		CIS	SV	50	
EmailAddress		CIS	SV	125	MAIL
PhoneNumber		CIS	SV	25	TEL
Mobile		CIS	SV	25	TEL
AccountStatus		CIS	SV	12	

Edit Entity - JDBC

- **Optional: Account Control.** UMS: New Project Additional Entity: JDBC -> Entity Configuration: JDBC -> Account Control.
 - Account control is optional and sets the active value for an account. XID can report on discrepancies between entities.
 - It is recommended to follow the detailed instructions in the user manual for setting account control.
 - Active account attribute & value.
 - 'AccountStatus' -> 'Active'.
- Click 'OK' to save the entity configuration.
 - Entity configuration is not saved permanently until the project is saved.
- Save the project

Matching Rules

- Objective: Configure matching rules JDBC. UMS: New Project Additional Entity: JDBC -> Set Matching Rules.
- Attributes are configured for the purposes of matching identity objects between entities.
- The 'Project1-Match' tab combo boxes are populated once the entity schema is configured.
 - The matching rules between entity 1 and 4 are configured on the entity 4 matching rule row. Entity 1 matching rules are reserved for loop back.
 - Configure SAP->JDBC entity matching rule:
 - Set entity 1 combo box to 'Employee Number'.
 - Set entity 4 combo box to 'EmployeeNumber'.
- Save the project.
- User manual sections: (UMS) XID Architecture -> Match *has further detail regarding matching rules.*

Business Rules

- Objective: Configure business rules for JDBC.
 - UMS: New Project Additional Entity: JDBC -> Set Business Rules.
 - Business Rules define relationships between entities at a field/attribute level.
 - At least one rule has to be configured to a maximum of 30 rules.
 - Configure essential rules only.
- Click the '4. IDV – *entity*_Schema' tab where *entity* is the type specified at entity position 4 which is JDBC.
- User manual sections: (UMS) XID Architecture -> Business Rules Schema Map *has further detail regarding business rules.*

Business Rules

- **SAP->JDBC Business rules.** UMS: New Project Additional Entity:
JDBC -> Set Business Rules.
 - The training module will only configure 2 rules. Not all rules in the schema have to be configured.
 - If required follow the process in the user manual to configure the rules in the table below.
 - Entity 1 attributes are located under IDV and entity 4 attributes under Application.
 - The following rules will be configured for this training module:

Entity 1 (IDV)	Entity 4 (Application)	Subscribe Entity 1 to Entity 4	Publish Entity 4 to Entity 1	Merge Authority
Org Unit	Department	sync	ignore	IDV
Position Title	Title	sync	ignore	IDV

- Save the project.

Optional Report

- Objective: Execute Project report including user selected entity combination. [UMS: New Project Report](#).
- Click the 'Project1-Architect' tab.
- Select the 'SAP' and any other entity combination by clicking the entity icons. Clicking the entity icon again will de-select the entity from the report. The primary entity has to be selected.
- Click the 'Report' menu and select 'Run'.
 - An entity load error usually indicates an issue with the entity configuration. The appendix has a troubleshooting section.
- View the Report Summary by clicking 'Report' & selecting 'Show Summary'.
- Follow the Encryption Key Processing in the report section of this document and/or follow the instructions as per the user manual section ([UMS](#)) [Key Processing](#).

EXACT IDENTITY

Section 5

XID General



XID Report Options

- Objective: Understand the XID Report Options. [UMS: Reporting -> Report Configuration change](#).
- The report configuration can be changed to select or deselect items that are to be included in the report. This allows customisation of what detail will be highlighted.
- The configuration can be updated and a summary re-displayed without having to re-run the report.
- XID Report Config.
 - Click 'Report' then select 'Report Config'.
 - Example 1: To exclude the 'IDV to Entity' orphans for example, click the 'Match IDV to Entity – ID Vault Orphans' check box.
 - Click 'OK' to update the Report Configuration.



The screenshot shows a 'Report Configuration' dialog box with a title bar. Inside, there is a section titled 'Matching IDV to Entity' which contains three items, each with a checkbox to its right:

Item	Checkbox
Match: IDV to Entity	<input checked="" type="checkbox"/>
Match: IDV to Entity - ID Vault Orphans	<input type="checkbox"/>
Match: IDV to Entity - Duplicate Matches	<input checked="" type="checkbox"/>

Edit Entity - Schema

- Objective: Update Entity Schema Table
- UMS: New Project Workshop -> Edit Configuration: SAP -> Schema table editing.
- Special Field/Attribute - UMS: Appendix -> Schema Combo Box content.
 - Edit Field/Attribute is manual for existing entry.
 - Select the Special Field/Attribute cell and enter the special value.

Combo Value	Description
ACCNT	Specifies the attribute/field value is the account name.
GN	Given Name.
SN	Surname.
FN	Full Name.
DN	Distinguished Name.
UID	Unique Identifier. This identifies the primary unique attribute/field used for matching.
DEPT	Department.
LOCN	Location.
MAIL	Email.
TEL	Telephone/Mobile/Facsimile etc. number.
X	The field is in the LDIF, XML or CSV file but will not be processed by XID. The value will also be excluded in the memory load.
- or blank	No special attribute significance.

- Move Field/Attribute row.
 - Row order is important for CSV files and can improve efficiency of processing XML and LDIF files.
 - Highlight a row and move the row to the desired location in the table.

Change Project

- Objective: Open a different XID project.
 - UMS: XID Functions -> Open XID Project.
- Upon XID start, XID will open the last saved project
- Click the 'File' menu and select 'Open'.
 - Click 'Yes' when informed about clearing the existing project.
- Select the XID project from the file list box.
- Click 'OK' then 'Yes'.
- Click 'OK' to close the Project Setup window and to open the selected project.



XID Desktop Controls

- Objective: Understand the XID Desktop Controls.
- Controls:
 - Check Multiple Matches.
 - Checked: Will continue searching for further matches after the first match. Further matches recorded as duplicates.
 - Business Rule strict case.
 - Checked: Will invoke case sensitivity when comparing attribute items.
 - Match Rule strict case.
 - Checked: Will invoke case sensitivity when comparing match items.
 - Test Mode.
 - Checked: Will process a sample of the input files for test purposes. The edit box to the right of the check box contains the value of the maximum number of records to sample. This value can be changed to raise or lower the sample.
 - Verbose Display.
 - Checked: Will display all report processing information.
 - Unchecked: Will display minimal report processing information.
 - LDIF ver1.
 - Checked: LDIF input uses '=' instead of ':' to distinguish name/value pairs.
 - Unchecked: LDIF uses ':' to distinguish name/value pair (default).



Operational Parameters

- Requires Windows or Windows Server operating system.
- Single Entity Identity count $\leq 250K$ identities.
- 2 Entities Minimum. 5 Entities Maximum.
 - No limit to the number of Projects.
- 50 attributes maximum per entity schema.
- 20 attributes available for business rules processing.
- 30 schema map rules per entity.



Questions & Answers

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