Syniti Metadata Discovery

Webapp Installation Guide 2.1

BackOffice Associates, LLC, d/b/a Syniti
www.syniti.com
info@syniti.com

Contents

Syniti Metadata Discovery Overview

This document describes Syniti Metadata Discovery application.

Generic Capabilities

Metadata Discovery

- Schemas, tables (objects) and fields (attributes)
- Custom Objects
- Object and Attribute level Relationships from
    - Constraints (Key structure)
    - Object Dependencies
    - Data Dictionary information
- SAP ABAP pool and cluster tables
- SAP HANA model views (including XSA / HDI)
- Object Row Counts and Size
- Transactions and Transactions by Application Module
- Interfaces (iDOCs) by Direction

Ubiquitous Connectivity

- Connectivity to on-prem databases and data warehouses.
    - OLE, ODBC, JDBC
- Connectivity to cloud databases and SaaS based applications
    - ODBC, OData, HTTPS, REST, SOAP
- Can leverage the customers iPaaS or API management solution.

Conceptual Grouping of Data Objects

- Navigate through application components and discover how data objects/ tables are categorized within the application module hierarchy.
- Automatically create logical business friendly names and use for grouping of objects across scanned systems.
- Jump start your Catalog by integrating that business language into one or many Metadata Catalogs and Business Glossaries.

- Navigate through application components and discover which transactions exist and how they are related to the application or modules within the application
- Where relevant also relate publicly available APIs and their coverage wi
- thin the application.
- Relate these transactions to business terminology and jump start your governance initiative by discovering new concepts that you may want to define as a Business Term and relate to the technical metadata.

Create of Application Module Hierarchies

- Decipher application specific metadata and structure to automate business user friendly, Application Module Hierarchies.
    - Extend those hierarchies to be cross application and cross functional supporting the unique way applications interact in your application ecosystem.
- Automate the creation of Conceptual Groupings of data elements from discovered Application Module Hierarchies.

Metadata Exchange between Metadata Management solutions

- Leverage Metadata scanners across technologies and share output between them for Data Catalog's, Data Lineage, or Metadata Management.
- Extensible framework to extract, map and export/ load metadata from popular solutions.
- Such as: Terms, Policies, Technical Metadata, Taxonomies, and Relationships.

Metadata Scanner Capability Matrix

Application	Objects & Attributes	Relationships - Constraints	Additional Relationships - Dependencies	Transformations	Reference Data	Custom Objects	Module Hierarchy	Interfaces
SAP ECC	√	√	√		√	√	√	√
SAP CRM	√	√	√		√	√	√	√
SAP SCM	√	√	√		√	√	√	√
SAP SRM	√	√	√		√	√	√	√
SAP HCM	√	√	√		√	√	√	√
SAP PLM	√	√	√		√	√	√	√
SAP APO	√	√	√		√	√	√	√
SAP EWM	√	√	√		√	√	√	√
SAP S/4HANA	√	√	√		√	√	√	√
SAP C/4HANA	√	√	√				√	
SAP HANA	√	√	√		NA	NA	NA	
SAP Hybris Marketing	√	√	√				√	
SAP Hybris Commerce	√	√	√				√	
SAP SuccessFactors	√	√	√		√		√	
SAP Ariba	√	√	√				√	
Workday	√	√	√		√		√	
Salesforce	√	√	√		√	√	√	
Snowflake	√	√						

Application	Product Name	Syniti Scanner
SAP ECC	SAP ERP	SAP NetWeaver
SAP CRM	SAP Customer Relationship Management	SAP NetWeaver
SAP SCM	SAP Supply Chain Management	SAP NetWeaver
SAP SRM	SAP Supplier Relationship Management	SAP NetWeaver
SAP HCM	SAP Human Capital Management	SAP NetWeaver
SAP PLM	SAP Product Lifecycle Management	SAP NetWeaver
SAP APO	SAP Advanced Planning and Optimization	SAP NetWeaver
SAP EWM	SAP Extended Warehouse Management	SAP NetWeaver
SAP S/4HANA	SAP S/4HANA	SAP NetWeaver
SAP C/4HANA	SAP C/4HANA	Odata Generic
SAP HANA	SAP HANA	SAP HANA
SAP C4C	SAP Hybris C4C	Odata EDM
SAP Hybris Marketing	SAP Hybris Marketing Cloud	Odata EDM
SAP Hybris Commerce	SAP Hybris Commerce Cloud	Odata EDM
SAP SuccessFactors	SAP SuccessFactors	Odata EDM
SAP Ariba	SAP Ariba	Open API Specification | SAP Ariba
Workday	Workday	XML | SOAP
Salesforce	Salesforce	Salesforce
Snowflake	Snowflake Cloud Data Platform	Snowflake

What other technologies does Syniti support?

Syniti has worked with over 300 different types of systems and applications over the years from out of the box to heavily customized. Our focus on Business Outcomes as it relates to data, required us to capture and discover metadata from all these systems for use in automation and machine learning, so that we could deliver better outcomes for our customers:

Leaving them with successful new ERP implementations, through a smooth Data Migration Go-Live.

Establishing Roles, Ownership, Standards and Policies so that an effective Data Governance organization can drive better business outcomes as it relates to their Business and Data Strategy.

Drive to meet and keep high levels of Data Quality Standards and process capability measurements.

Rapidly deploy Real Time Data Replication to cloud based data stores and data lakes, SAP HANA, Apache Kafka, Snowflake, Google Big Query, Azure Data Lake, AWS S3, Redshift, etc...

In those quests we have created custom or reversed engineered many metadata connectors and scanners using the Syniti Knowledge Platform. If your technology is not on the list above, chances are that we have connected to it before and made a scanner for another customer that isn't productized.

Our framework allows services, and customers alike, to build these scanners quickly and easily given the below:

Research time to determine where the metadata is stored and how it is exposed for collection

What type of application is in scope (ETL, ERP, CRM, BI, Data Warehouse, process area specific application, etc...)

1. Is there an underlying database?
2. Are there public APIs?
3. Will DDL parsing need to be involved, etc...
4. Creation of Extract method(s) to connect and retrieve the necessary metadata
5. Mapping to Syniti Metadata Repository

Install Syniti Metadata Discovery

The application can be installed on Syniti Solutions Stewardship Tier versions 7.1.4 and above.

Download the Application & License

The Syniti Metadata Discovery application and/or license are obtained by opening a support ticket at support.syniti.com.

Perform the following steps to retrieve the necessary information for a license request:

1. On the Stewardship Tier application server, locate the Hardware Identifier program (called **"HardwareIdentifier.exe"**) included in a zip file along with the Stewardship Tier installation software and documentation previously downloaded from Syniti.

2. Open the program.
3. Click **Generate**.
4. Copy the automatically generated ID and collect the following additional information. All information below pertains to the application server running Stewardship Tier; no information is needed regarding the database server:
    a. Hardware ID (as mentioned above)
    b. Windows computer name
    c. Number of processor cores (as shown in the Task Manager CPU tab)
    d. Usage of the Stewardship Tier instance, as in, DEV, TEST (or QA) or PROD
5. Syniti Licensing will deliver the license file via the support ticket.

Install the License

Perform the following steps to install the license:

1. Log in to the Stewardship Tier site as an Administrator.
2. Select **Admin > Configuration > Product Licenses** in the Navigation pane.
3. Click the Upload a file icon in the **FILE NAME** column next to the Upload a New Product License link.
4. Locate the license file that was provided by Syniti Licensing.
5. Click **Open**.
6. Verify the license is uploaded.
    a. **NOTE**: If the Navigation pane does not display all the licensed components as expected, use the browser refresh button or the F5 key to refresh the screen. At this point the full vertical menu will appear.

Install OR Upgrade the Application

Perform the following steps to install the application:

1) Right click on **Metadata_Discovery.zip** and go to **Properties**. Ensure to unblock the file if it is blocked.
2) Unzip the file
3) Navigate to the STEWARDSHIP TIER Installation folder (e.g. D:\BOA\DSP or C:\Program Files (x86)\BOA\DSP)
4) Back up the STEWARDSHIP TIER Install\BOA\DSP folder to a compressed zip file
5) Verify that a complete recent backup already exists for the CranSoft database.
6) Stop IIS

   This process disconnects all active Stewardship Tier users, so it is highly recommended to perform the install when no users are on the system. This process stops IIS on the web server.

   a) Open Windows *Start* Menu.
   b) Open the **Command Prompt** (run as an administrator).
   c) Type: **IISReset –stop**.
   d) Press the **Enter** key.
   e) Leave the Command Prompt window open for later use.

7) Stop all services that start with "Cransoft Service …"

   This process stops all STEWARDSHIP TIER background jobs, so it is highly recommended to perform the install when no scheduled operations are running on the system.

   a) Open Windows *Start* Menu.
   b) Select **Administrative Tools**.
   c) Run **Services**.
   d) Right-click the STEWARDSHIP TIER service.
   e) Select **Stop**.
   f) Repeat the previous two steps for any additional Stewardship Tier services.

8) Copy the **Web** folder from the zip file to your existing Stewardship Tier install\Web folder. If prompted, replace the files in the destination.
9) Copy the **Databases** folder from the zip file to your existing Stewardship Tier install\Databases folder. If prompted, replace the files in the destination. (Note – when copying the Databases\Apps folder do not replace files in that folder)
10) If Installing

a) Navigate to Stewardship Tier install\Databases\Install and execute file **Install_Metadata_Discovery_WebApp.bat** (run as an administrator)

i) Be sure to run the .bat file with Administrator privileges. This can be accomplished by right-clicking on the file and choosing 'Run as administrator'

ii) If you are asked "Do you want to allow this app to make changes to your device?" Respond Yes.

11) If UPGRADING

a) Navigate to Stewardship Tier install\Databases\Install and execute file **Upgrade_Metadata_Discovery_WebApp.bat** (run as an administrator)

a) Be sure to run the .bat file with Administrator privileges. This can be accomplished by right-clicking on the file and choosing 'Run as administrator'

b) If you are asked "Do you want to allow this app to make changes to your device?" Respond Yes.

12) A Terminal window will open as the install runs. Once complete, you will see a message that says "Press any key to continue . . .".

13) Press any key to close the terminal window

14) Start all services that start with "Cransoft Service …"

a) Open Windows *Start* Menu.

b) Select **Administrative Tools**.

c) Run **Services**.

d) Locate the STEWARDSHIP TIER service(s).

e) Right-click the STEWARDSHIP TIER service.

f) Select **Start**.

g) Repeat the previous two steps for any additional Stewardship Tier services.

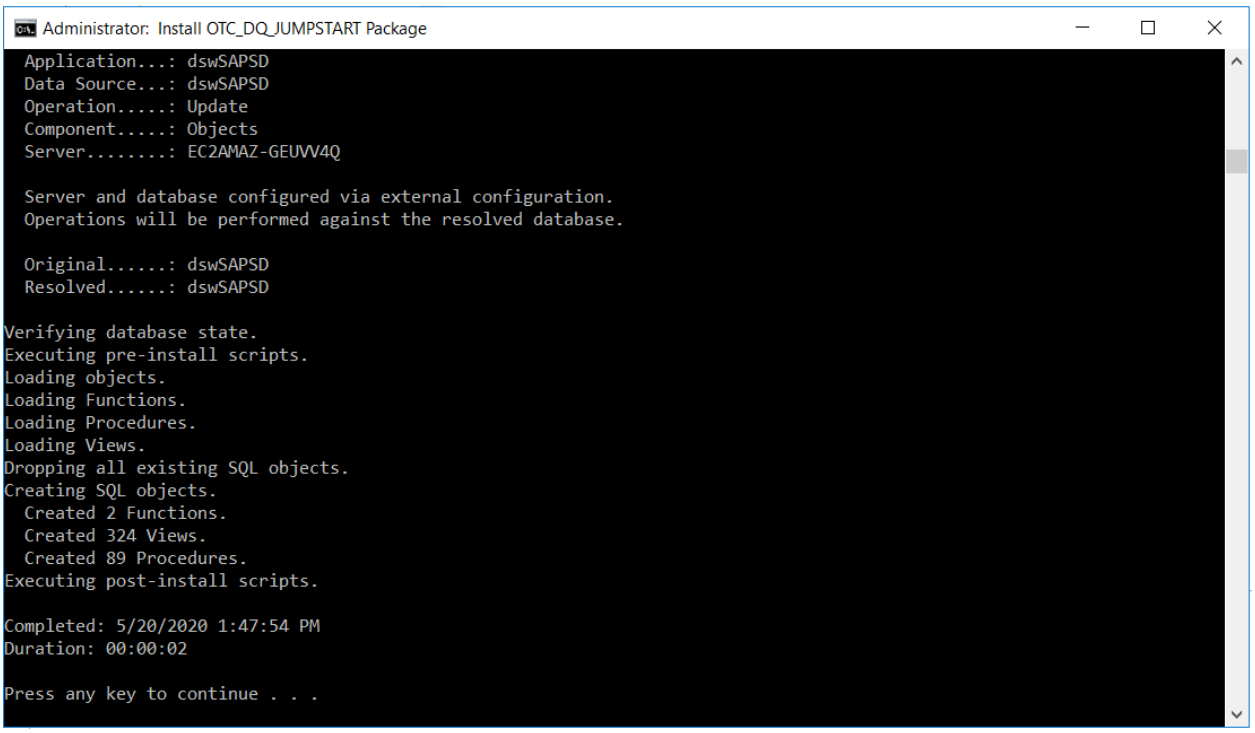
15) Start IIS

a) Open Windows *Start* Menu.

b) Open the **Command Prompt** (run as an administrator).

c) Type: **IISReset –start**.

d) Press the **Enter** key.



Post Install Configuration Steps

1) Metadata Discovery was designed primarily to integrate the SST with the Syniti Knowledge Platform and Catalog. For this reason, the Knowledge Tier Data Extraction page must be set up with at least one record to get the System Type Extension main page to return records.
    a. An Optional Pre-requisite is to have the Knowledge Tier API user credentials. These can be retrieved from support.syniti.com. If there is no knowledge tier just enter an extraction ID so that there is a row on the Knowledge Tier Data Extraction Page
    b. Navigate to the Metadata Exchange --> Knowledge Tier Data Extraction
        i. Add new record
        ii. Enter Extract ID (I.e. name of the company's tenant)
        iii. Enter base path and API credentials (if you have them)
            1. For additional information on the Knowledge Tier REST API interface click here
        iv. Test Connection by clicking each event on the horizontal view. If no errors are returned then the test was successful.
        v. Once setup there is a service page that runs all supported end points every 4 hours.
            1. This page can be configured to meet the integration requirements as needed.
2) Update Parameters to select an Internal Job Queue for background jobs to be created. Recommended to select the Background queue, unless a specific queue has been created for Metadata Discovery specifically.
    a. Navigation Metadata Discovery --> Configuration --> Parameters --> Internal Job Queue (Label) --> Service Queue

b. Click Edit
c. Select desired Job Queue

Scanner Installation

1) Scanner installations can be requested from support.syniti.com
    a. **NOTE:** SAP HANA is for Database scanning only and is only intended to be used when SAP HANA is being used as a Data warehouse or pure database rather than a backend DB for an SAP Application. SAP NetWeaver scanner is used for SAP S/4HANA which is a different SAP product than SAP HANA.
2) Please use the Metadata Scanner Capability Matrix to better understand the scanner(s) installed.
3) For Instructions on how to run individual scanner please refer to the application documentation and not the installation guide.