# Tzunami Deployer
# LiveLink Exporter Guide

**Supports migration of LiveLink contents into Microsoft SharePoint using Tzunami Deployer**

**Version 4.0**
**Last Updated:  March 31, 2024**

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# PREFACE

This guide provides installation procedures for Tzunami LiveLink Exporter and detail steps to extract contents from LiveLink contents using Tzunami LiveLink Exporter. The guide also describes how to extract contents non-interactive way using command-line instructions and best practice.

This preface contains the following topics.

- Intended Audience
- Conventions
- Technical Support
- Comments and Suggestions

## INTENDED AUDIENCE

Tzunami LiveLink Exporter Guide is intended for:

- System Administrators who are responsible for exporting LiveLink contents and setting migration environment using Tzunami Deployer.
- Project Managers and IT Managers who create and regulate usage of Tzunami Deployer and Tzunami LiveLink Exporter.

## CONVENTIONS

The following text conventions are used in this document:

- Commands and keywords are given in **boldface**
- Terminal sessions, console screens, or system file names are displayed in fixed width fonts

**Caution** indicates that the described action might result in program malfunction or data loss.

**Notes** contain helpful suggestions about or references to materials not contained in this manual.

**Tips** provide information that might help you solve a problem.

# TECHNICAL SUPPORT

Before contacting Tzunami Support team, ensure that you are referencing the latest copy of this user guide (Ctrl+Click to follow link) *Tzunami Deployer LiveLink Exporter Guide*.

For more information, please contact Tzunami Support Team at *support@tzunami.com*

# COMMENTS AND SUGGESTIONS

Your feedback is important to us and will help us to provide the most accurate and high quality information possible in our documentation. Send us comments or suggestions by email to *support@tzunami.com*. Be sure to include as much of the following as possible:

- The document title.
- The location that the document was accessed from (either downloaded from Tzunami web site or the Tzunami Deployer User Guide available in Tzunami Deployer).
- The section or chapter number and the original text found in the document.

When you send information to Tzunami Deployer, you grant Tzunami a non-exclusive right to use or distribute the information in any way it believes appropriate without incurring any obligation to you.

# 1 INSTALLING TZUNAMI LIVELINK EXPORTER

This chapter contains information about installing Tzunami LiveLink Exporter. It contains the following topics:

- *System Requirements*
- *Installing Tzunami LiveLink Exporter*
- *Uninstall Tzunami LiveLink Exporter*

## 1.1 SYSTEM REQUIREMENTS

The following requirements must be met to use Tzunami LiveLink Exporter:

**Table 1-1: System Requirements**

| Components | Minimum Requirements |
| --- | --- |
| Computer and processor | 2GHz Pentium processor or equivalent |
| Memory | 2 GB (Minimum); 4GB (Recommended) |
| Hard disk | 50Mb (additional space will be required for the Tzunami Deployer projects, which may vary from 10 Mb to 4 GB). |
| Supported Operating System | Windows Server 2000/2003/2008/2012, Windows XP, Windows Vista, Windows 7, Windows 8 & Windows 10. |
| Supported Architectures | x86 and x64 |
| Network | Intranet/Internet access depending on connectivity requirements |
| Display | 800 x 600, 256 colors (minimum); 1024 x 768 high color, 32-bit (recommended) |
| Microsoft .NET Framework | Microsoft .Net Framework 2.0 |
| Additional Requirements | LiveLink server configured and running |

## 1.2 INSTALLING TZUNAMI LIVELINK EXPORTER

Tzunami LiveLink Exporter requires that the latest version of Microsoft Visual J# Redistributable Package is installed and configured on the machine that is used to run the exporter. The latest version can be downloaded from Microsoft at http://msdn.microsoft.com/en-us/vjsharp/bb188598.aspx.

**To install Tzunami LiveLink Exporter:**

1. Unzip the zip file, and run TzunamiLiveLinkExporter.msi. The Tzunami LiveLink Exporter setup wizard (Welcome window) will launch. To advance through the install wizard, click **Next** on the bottom of the window.
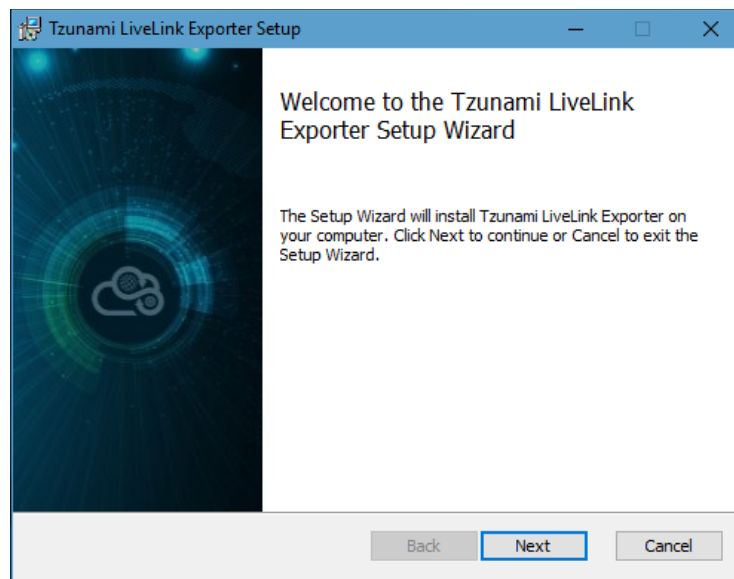


**Figure 1-1: Welcome Window**

2. In the End-User Licensing Agreement panel, click "**I accept the terms in the License Agreement**" and click **Next** to continue installation.
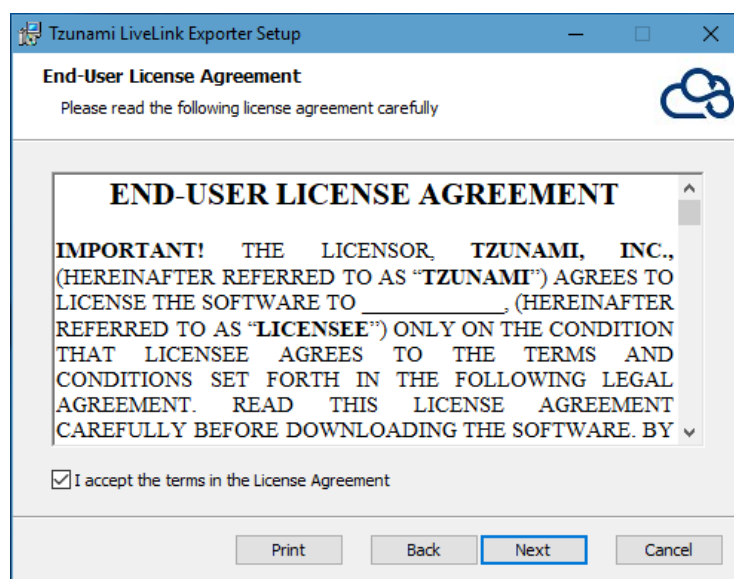


**Figure 1-2: End-User Licensing Agreement**

You are advised to read the terms of the license carefully before proceeding with the installation. If you decline the license terms, the installation cannot proceed.

3. In the Custom Setup panel, do one of the following:

   • To accept the default Destination Folder, click **Next**.

   • Click **Browse**, locate and select a destination folder, click **OK,** and then click **Next**.
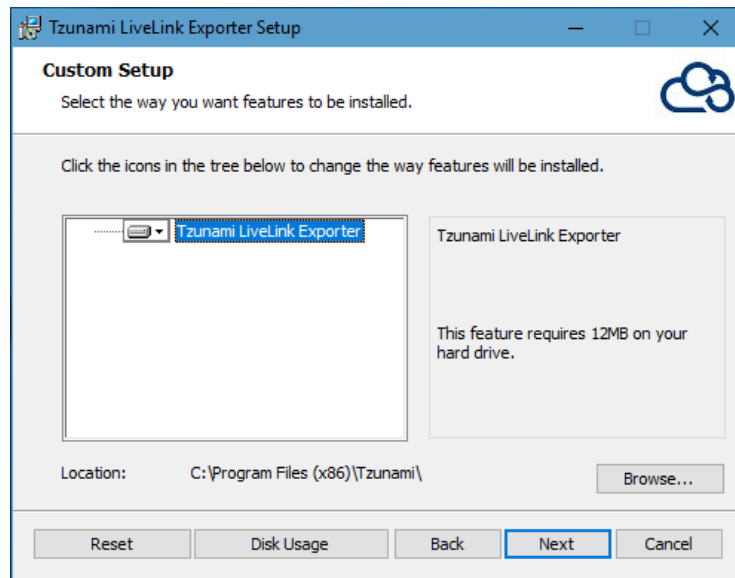


**Figure 1-3: Custom Setup Window**

4. In the Ready to install Tzunami LiveLink Exporter panel, click **Install**.
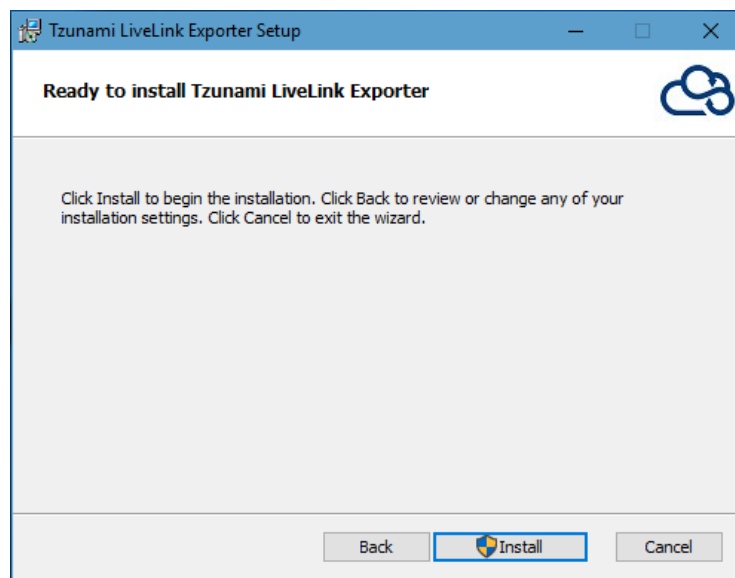


**Figure 1-4: Installing Tzunami LiveLink Exporter Window**

5. In the Completed Tzunami LiveLink Exporter Setup Wizard, to exit the wizard, click **Finish**.
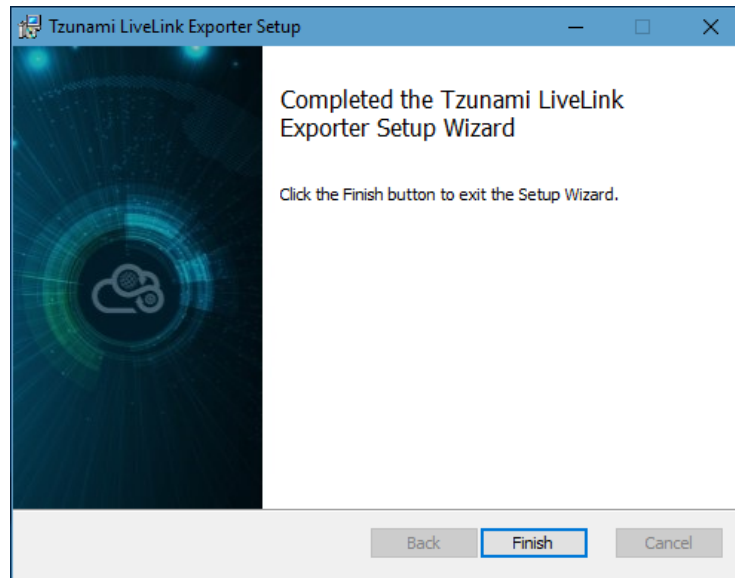


**Figure 1-5: Installation Complete Window**

When Tzunami LiveLink Exporter is installed, it comes with a default license that can be used for evaluation purpose only. This license is limited in time and number of operations.

## 1.3 CONFIGURATION OF TZUNAMI SERVICE SETTINGS

1. When installing **Tzunami Deployer/Exporter/Remote Service** for the first time, a **Tzunami Service Settings** dialog is displayed. In **Tzunami Service Settings,** the Licensing Service, Link Resolver Service and O365 AD Service are pointed to localhost (same machine).
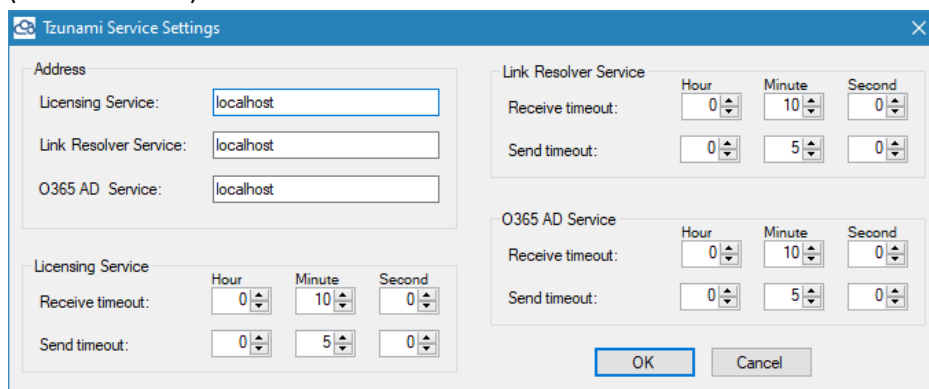


**Figure 1-6 Deployer Settings Manager**

User can run the **Settings Manager.exe** application from the installation directory to display this service settings dialog at any time and updated the settings to point the Tzunami services as required.

In case of Remote Service installation, restart the Tzunami Remote Service after updating the Tzunami Service Settings.

If these services are installed in other machine, point to that machine with machine name or IP Address.

2. Click on **OK**.

# 1.4 UNINSTALL TZUNAMI LIVELINK EXPORTER

This section of the guide illustrates different ways to remove or uninstall Tzunami LiveLink Exporter from your LiveLink Server. Here are the two different ways to uninstall Tzunami LiveLink Exporters:

- Uninstallation using Installer
- Uninstallation using Control Panel

To uninstall Tzunami LiveLink Exporter, user needs to be a Local Administrator in the LiveLink Exporter installed machine. Uninstalling Tzunami LiveLink Exporter is simple and easy. You can remove or uninstall it in no time. You don't need to reboot your computer once the uninstalling process is complete.

> Log files, licensing information files etc. will remain after uninstalling Tzunami LiveLink Exporter. You can manually delete those files from your computer if needed. By default logs are located at the "C:\Program Files\Tzunami\Deployer 4.0\Exporter\Logs", or where Tzunami LiveLink Exporter is installed. Tzunami LiveLink Exporter Options information will be available in "C:\Documents and Settings\All users\Application Data\Local\Tzunami" location.

## 1.4.1 Uninstallation using Installer

**To uninstall Tzunami LiveLink Exporter using Installer**

1. Close **Tzunami LiveLink Exporter**.
2. Unzip the zip file, and run TzunamiLiveLinkExporter.msi. The Tzunami LiveLink setup wizard (Welcome window) will launch. To advance through the remove installation wizard, click "**Next**" at the bottom of the screen.
3. In the Change, repair or remove installation panel, click "**Remove**" button to proceed to remove Tzunami LiveLink Exporter from your computer.
4. In the Ready to remove Tzunami LiveLink Exporter panel, click "**Remove**" to remove Tzunami LiveLink Exporter from your computer.
5. Click **Finish** to exit the setup wizard.

> You can right-click Tzunami LiveLink Exporter setup (TzunamiLiveLinkExporter.msi) file and select **Uninstall** to remove or uninstall Tzunami LiveLink Exporter from your computer.

### 1.4.2 Uninstallation using Control Panel

1. Close **Tzunami LiveLink Exporter.**
2. Click **Start** > **Control Panel** > **Add or Remove Programs**.
3. In Add or Remove Programs window, right-click the Tzunami LiveLink Exporter application you want to remove, and then click **Uninstall**.

# 2 TZUNAMI LIVELINK EXPORTER

This chapter contains information about Tzunami LiveLink Exporter. It contains the following topics:

- *Overview*
- *Exporting from LiveLink*
- *Command-line Export*
- *Logging settings*
- *Auto Pause on Error and Resume*
- *Best Practice*

## 2.1 OVERVIEW

Tzunami LiveLink Exporter enables migrating LiveLink content into SharePoint 2007, SharePoint 2010, SharePoint 2013, SharePoint 2016, SharePoint 2019 or SharePoint Online using Tzunami Deployer.

To load LiveLink content into Tzunami Deployer, you must first extract the content, using LiveLink Exporter, into TDX (Tzunami Deployer Export) and STDX (Separate Tzunami Deployer Export) files. You can then load this TDX file into a Deployer project.

> When working with Deployer on several machines, you can run an export on one machine and load the exported data on another.
>
> Tzunami LiveLink Exporter is an extension module of Tzunami Deployer. You can work with this module independently of Tzunami Deployer.

### 2.1.1 Supported Types

The following items are exported from LiveLink:

- Enterprise Workspaces
- Discussions (Topics and Replies)
- Tasks (Tasks Lists, Tasks Groups, and Tasks) and Milestones
- Channels and News
- Projects
- Folders
- Documents, Text Documents, and Compound Documents
- Links
- Aliases
- Email Volume's
- Binders
- Generations
- Record Management
- Business Workspaces
- Related Business Workspaces

### 2.1.2 Supported Types of Community of Practice (COP) module

The following items are exported from LiveLink COP module:

- Community
- Library
- Mail Archive
- Mail
- Blog
- Blog Entry
- Blog Comment
- FAQ
- FAQ Entry
- Forum
- Forum Topic
- Email Folder

If any of these items have attachments, the exporter scans them, looking for Documents and Text Documents, and exports them as well. When the item is deployed to SharePoint, it is deployed together with its attachments.

Compound Documents and Tasks Groups are converted to Folders.

### 2.1.3 Security

In addition to the structure and items, Tzunami LiveLink Exporter extracts security information. The following permissions are used in the exporter:

- See
- See Content
- Modify
- Edit Attributes
- Delete Versions
- Add Items
- Delete
- Reserve
- Edit Permissions
- None

Each item is assigned an ACL defining the permissions of the various members according to the roles they were assigned.

> The exporter automatically creates four default roles that are used during the deployment process. The roles include Reader (See and See Content permissions), Contributor (See, See Content, Modify, and Edit Attributes, and Add Items permissions), Web Designer (See, See Content, Modify, Edit Attributes, Delete Versions, Add Items, Delete, and Reserve permissions), and Administrator (user has full permissions).

## 2.1.4 Nested Groups

LiveLink Exporter exports the nested groups as part of ACL item when nested groups are created and applied in LiveLink items. By default, the key **LiveLinkExportNestedGroups** is set to **true** in **TzunamiExporter.exe.config** file that enables the Tzunami LiveLink Exporter to export the nested group as well.

```
28        <!--<add key="LiveLinkDirectRoots" value=""/>-->
29        <add key="LiveLinkDecodeServerValues" value="false" />
30        <add key="LiveLinkUseSecurityEntitiesCached" value="false" />
31        <!-- Setting LiveLinkExportNestedGroups to false, the nested
32        groups won't be exported as part of Item ACL -->
33        <add key="LiveLinkExportNestedGroups" value="true" />
```

**Figure 2-1 Nested Groups Export (Enabled)**

> The configuration file is located in the exporter installation directory (e.g. C:\Program Files (x86)\Tzunami\Deployer 4.0\Exporters\LiveLink)

Since, target SharePoint does not support the nested groups (SharePoint supports groups in flat structure only), **Tzunami Deployer** migrates LiveLink groups in flat structure according to SharePoint's behavior.

**Tzunami Deployer** shows the LiveLink Groups (nested as well) under **Source Groups** panel during deployment process. User can map LiveLink groups to existing SharePoint groups in Group mapping wizard or can map to **<Create New Group>** option that will create groups in SharePoint automatically (similar to LiveLink groups) post migration.

> **Tzunami Deployer** automatically handles the circular dependency of nested groups when detected.

If user does not want to migrate the nested groups as part of ACL item, then the key **LiveLinkExportNestedGroups** need to set **false** in **TzunamiExporter.exe.config** file as shown in the below figure before running the **Tzunami LiveLink Exporter**.

```
27          <add key="LiveLinkFetchVersion4RemoteCache" value="false" />
28          <!--<add key="LiveLinkDirectRoots" value=""/>-->
29          <add key="LiveLinkDecodeServerValues" value="false" />
30          <add key="LiveLinkUseSecurityEntitiesCached" value="false" />
31 ⊟        <!-- Setting LiveLinkExportNestedGroups to false, the nested
32 ┊        groups won't be exported as part of Item ACL -->
33          <add key="LiveLinkExportNestedGroups" value="false" />
```

**Figure 2-2 Nested Groups Export (Disabled)**

### 2.1.5 Credentials

LiveLink credentials are used for the LiveLink API. These are the same credentials that users use to log-in in order to access the LiveLink portal.

The account provided to the LiveLink Exporter should have the following LiveLink permissions:

- Log-in enabled

- System administration rights

HTTP tunneling credentials is used only when the HTTP tunneling option is selected. These credentials are for the HTTP Web server that performs the tunneling, that is, one of the front-end web servers of the LiveLink farm.

## 2.2 EXPORTING FROM LIVELINK

The Tzunami LiveLink Exporter enables you to export LiveLink contents to a TDX file.

When exporting, keep the following in mind:

**Export in small chunks**: When exporting from your source system, perform the export in small chunks of about 40K-50K files each that have a common business logic or some other logic.

**Ensure consistency**: Make sure that the content of the different exports does not overlap and that, while exporting, no changes are made to the source data.

In order to use HTTP tunneling, your Web server must meet the following requirements:

**Table 2-1: Web Server Requirements for HTTP Tunneling**

| Operating System | Web Server Communication | Web Server Authentication |
|---|---|---|
| Windows | • ISAPI<br>• CGI | • Basic<br>• Anonymous<br>• NTLM |
| Solaris | CGI | • Basic<br>• Anonymous |
| HP-UX | CGI | • Basic<br>• Anonymous |

### Using Secure HTTP tunneling is not supported

When the Web server is configured to accept only secure connections (**Error! Hyperlink reference not valid.**), HTTP tunneling cannot be used. In order to use HTTP tunneling, the Web server should be configured to accept requests also from non-secure connections (**Error! Hyperlink reference not valid.**).

A proxy server with authentication is not supported.

Depending on your connection method, the port and server values may differ according to the following information:

**Table 2-2: LiveLink Server and Port Definitions**

| HTTP Tunneling | Proxy Server | LiveLink/Front-End/Proxy Server | Port |
|---|---|---|---|
| Disabled | Disabled | The host name or IP address of the LiveLink server. Note that this entry should not contain URL protocol headers, such as http:// or https://. <br><br> In a single server installation environment, this should be the same as the host name of the Web server. That is, the host name used to access the LiveLink portal through the Web interface. | The port number on which the LiveLink server listens. The default is 2099. |
| Enabled | Disabled | The host name or IP address of the machine on which the Web server is running. Note that this entry should not contain URL protocol headers, such as http:// or https://. <br><br> In a single server installation environment, this should be the same as the LiveLink server. | The port number of the Web server (usually 80). If the port number is different, it appears in the URL used to access the LiveLink Portal. For example, http://llserver:888/livelink/livelink.exe. |
| Enabled | Enabled | The host name or IP address of the machine on which the Web proxy server is running. Note that in this case the host name and the port number of the Web server used for tunneling is obtained from the **LiveLink CGI URL** entry. | The port number of the Web proxy server. |

**To export to a TDX file:**

1. In Tzunami Deployer, right-click in the LiveLink tab source store area and **select Export LiveLink to TDX**.

   Or

   Click **Start > All Programs > Tzunami > Tzunami LiveLink Exporter**.

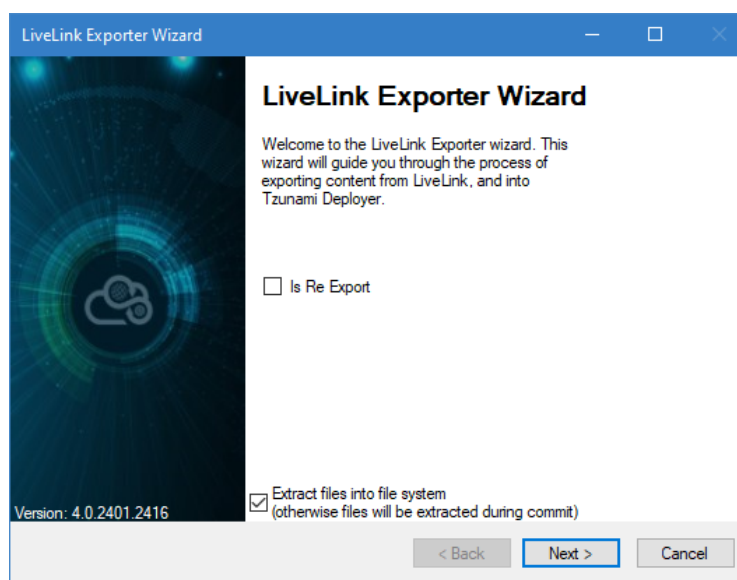   The Welcome screen of the Tzunami LiveLink Export Wizard appears.



**Figure 2-3: LiveLink Exporter Wizard – Welcome screen**

**Table 2-3: LiveLink Exporter, Welcome screen - Description of fields**

| Fields | Description |
|---|---|
| Is Re Export | Check this option to run the re-export from previous export project having failed items. |
| Extract files into file system (otherwise files will be extracted during commit | Check this option if you wish to download the binary files from LiveLink server to the file system and store them in the FileStore folder, in the same location as the TDX file. |
| | If this option is unchecked, no files are downloaded at the export stage. The files are only downloaded when they are needed, in the commit stage. |
| | To download files from LiveLink server during commit stage, you must install Tzunami LiveLink Exporter on the Tzunami Deployer installed machine. |

2. Click **Next**. The LiveLink Configurations screen appears. Use this screen to enter the settings required for the exporter to connect to LiveLink. The screen includes tabs: Web settings, Items, Advanced and Roots.

## a. Web settings

The Web settings tab allows you to enter the information required for connecting to the LiveLink service.



**Figure 2-4: LiveLink Configurations Screen – Web Settings Tab**

**Table 2-4: LiveLink Configurations, Web Settings Tab – Description of Fields**

| Field | Description |
|---|---|
| LiveLink CGI URL | Enter the URL to the LiveLink CGI integration process. For example, http://llserver/livelink/livelink.exe or http://llserver/livelink/llisapi.dll. |
| | This field is used to generate URLs of Aliases for reporting. When running the exporter on multiple LiveLink front-end Web or remote cache servers with the same back-end database, Tzunami recommends that you use the same values in all the exports. |
| Use HTTP Tunneling | Check this option if you wish to use HTTP tunneling. |
| | If you check this option, you must provide HTTP credentials in the HTTP Username and HTTP Password fields. |
| Use proxy server | Check this option if you wish to use a proxy server. This option is only available when you check Use HTTP Tunneling option. |
| LiveLink/Front-End Web Server/Proxy Server | Enter the hostname of the required server. |
| | The field name changes depending on your entries in the **Use HTTP Tunneling** and **Use Proxy Server** options. |
| Port | Enter the port number of the required server, based on your selection of HTTP tunneling and proxy server. |
| | If **Use HTTP tunneling** and **Use proxy server** remain unchecked, enter the port number on which the LiveLink server listens. |
| LiveLink Username | Enter the username for the LiveLink user account that has access to the LiveLink server. When using HTTP tunneling, the LiveLink username is case sensitive. |

| Field | Description |
|---|---|
| LiveLink Password | Enter the password for the account specified in **LiveLink Username**. |
| Remember password(s) | Check this option if you wish to save LiveLink password and HTTP password for next login |
| HTTP Username | This field only appears if you select **Use HTTP Tunneling**. Specify the HTTP username for an account known to the Web server. |
| HTTP Password | This field only appears if you select **Use HTTP Tunneling**. Enter the HTTP password for the account specified in **HTTP Username**. |

b. **Items tab**

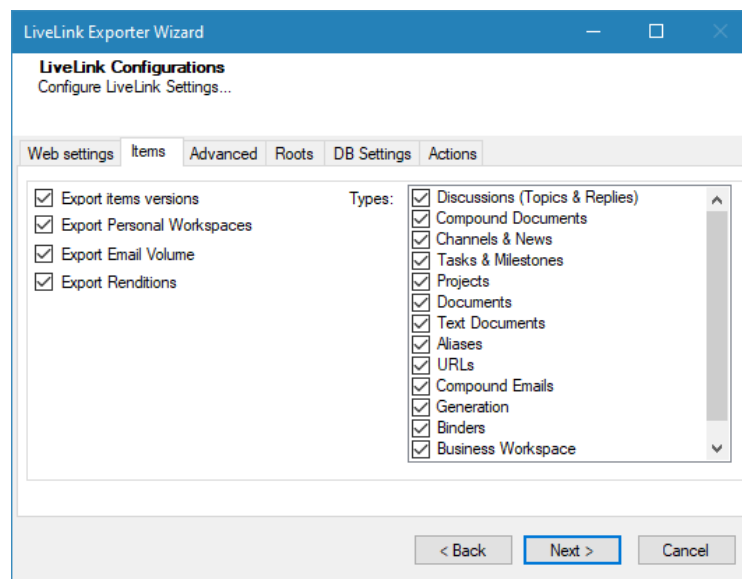The **Items** tab allows you to specify how the exporter should treat item versions.



**Figure 2-5: LiveLink Configurations Screen – Items Tab**

**Table 2-5: LiveLink Configurations, Items Tab - Description of fields**

| Field | Description |
|---|---|
| Export items versions | Check this option if you wish to export all versions of each item.<br><br>If you do not select this option, only the latest version of each item is exported. |
| Export Personal Workspaces | Check this option if you wish to export Personal Workspaces |

| | |
|---|---|
| Export Email Volume | Check this option to export emails from LiveLink server. |
| | To enable "Export Email Volume" option, the option "LiveLinkUseDB" in the Exporter Configuration file (TzunamiExporter.exe.config) must be **true** and which is by default set to **true**. |
| | By default, "TzunamiExporter.exe.config" is located at the "C:\Program Files (x86)\Tzunami\Deployer 4.0\Exporters\LiveLink", or where Tzunami LiveLink Exporter is installed. |
| | ```<!-- Set this flag to 'TRUE' to download items via DB--> <add key="LiveLinkUseDB" value="True"/>``` |
| | You must provide Database credentials in  Tab to extract emails from LiveLink. |
| Export Renditions | Check this option to export renditions from Livelink server. |
| Types | Check the types of item versions to export. Documents, Text Documents, URLs, and Aliases, Binders etc. are always exported. |
| | Supported Types are: Discussions (Topics & Replies), Compound Documents, Channels & News, Tasks & Milestones, Projects, Documents, Text Documents, Aliases, URLs, Compound Emails, Generation, Binders, Business Workspace, Related Business Workspace. |

c. **Advanced tab**

The **Advanced** tab allows you to specify the export options such as attachments, security, Additional Node Attributes, Categories & Attributes, Personal Workspace, URLs and Aliases.
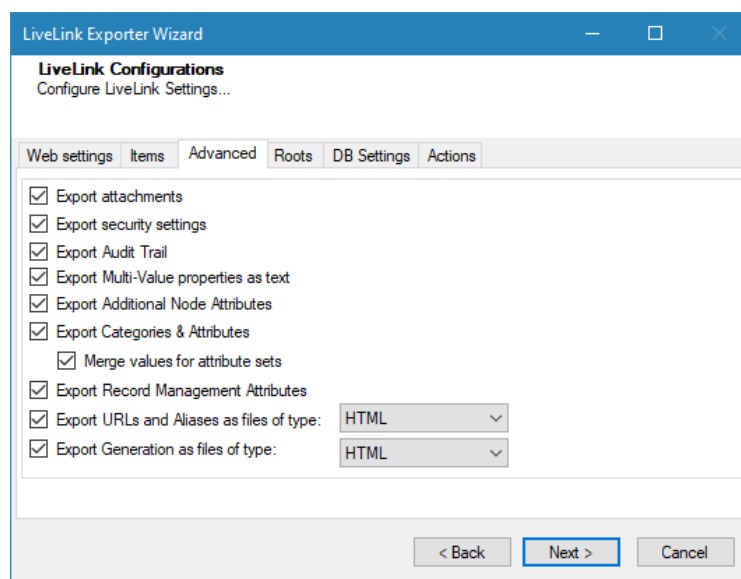


**Figure 2-6: LiveLink Configurations Screen – Advanced Tab**

**Table 2-6: LiveLink Configurations, Advanced Tab - Description of fields**

| Field | Description |
|---|---|
| Export attachments | Check this option if you wish to export item attachments. |
| Export security settings | Check this option if you wish to export the permissions (ACLs) of the exported items. |

| Field | Description |
|---|---|
| Export Audit Trail | Check this option to extract Audit Trail of items. |
| Export Multi-Value properties as text | Check this option if you wish to export Multi-Value Properties as text. |
| Export Additional Node Attributes | Check this option to assign additional metadata to items. This LiveLink function is mainly used in versions earlier than 9.0 and may considerably slow the export process. Tzunami recommends that you leave this option unchecked if it is not used in your LiveLink. |
| **Categories and Attributes** | |
| Export Categories & Attributes | Check this option to export categories and attributes of items. |
| Merge values for attribute Sets | Check this option to merge and export the values of attribute sets. If you don't check this option, the attributes set values will not be merged. **For e.g.** In the Attribute Set "*Category Types*" has values "A, B and C" in three different rows, and if the option is not selected, the exporter will export values in three different properties such as *Category Type* as 'A', *Category Type 1* as 'B' and *Category Type 2* as 'C'. |
| Export Record Management Attributes | Check this option if you wish to export record management attributes of items. |
| Export URLs and Aliases as file of type | Check this option if you wish to export URLs and Aliases as file of type HTML or ASPX |
| Export Generation as files of type | Check this option if you wish to export Document or Compound Document Generations as file of type HTML or ASPX. |

### d. Roots tab

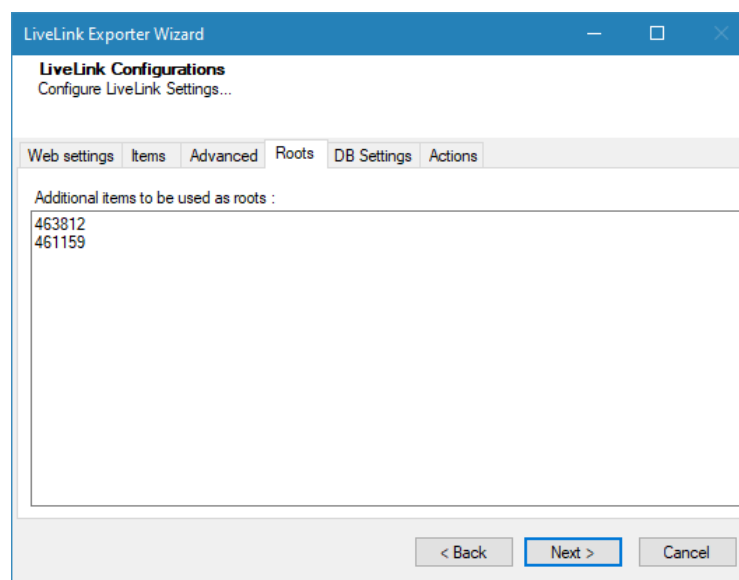The **Roots** tab allows you to enter URL or ID to be used as root folder.



**Figure 2-7: LiveLink Configurations Screen – Roots Tab**

**Table 2-7: LiveLink Configurations, Roots Tab - Description of fields**

| Field | Description |
|---|---|
| Additional items to be used as roots | Enter the ID of Additional Items in the text box to be used as root folder. Enter IDs in new line in case of use of multiple ids in direct root. |
| | If you want to include the children folder in direct root, include the folder in curly braces e.g. : |
| | 692318/{HR}<br>[692213,692319]/{Legal} |

e.  **DB Settings tab**

The **DB Settings** tab allows you to enter Database Credential to connect with the LiveLink Database Server. To enable **DB Settings** tab in the LiveLink Configuration wizard, you must set " LiveLinkUseDB" to **True** in the Exporter Configuration file (TzunamiExporter.exe.config).

By default, "TzunamiExporter.exe.config" is located at the "C:\Program Files (x86)\Tzunami\Deployer 4.0\Exporters\LiveLink", or where Tzunami LiveLink Exporter is installed.



**Figure 2-8: LiveLink Configurations Screen – DB Settings Tab**

**Table 2-8: LiveLink Configurations, DB Settings Tab - Description of fields**

| Field | Description |
|---|---|
| Server Instance | Enter the Server Instance for LiveLink Server. |
| Database Name | Enter the Database Name for LiveLink Server. |
| Username | Enter the username that has access to the Database on LiveLink Server. |
| Password | Enter the password for the account specified in the Username. |
| Database schema | Enter the Database schema for LiveLink Server. |
| DB Provider | Select the DB Provider from the drop down list. |
| Authentication type | Select the LiveLink Database Authentication type from the drop down list. |

| Field | Description |
|---|---|
| Storage Path | Enter the shared storage path. This option is used to download files from shared location (for example rendition files). |
| Download Document | Check the option to download the document(s) using DB Settings. |

**f.  Actions tab**

The **Actions** tab allows you to use different actions that can be taken in the exporter.

- **Auto Pause:** The export process is paused and resumed using this functionality at a set time each day. The feature can be turned on or off using the **Use Auto Pause** check box.  The feature can be checked by the user, who can also select the pause and resume times. The user can deselect it to turn off the feature.
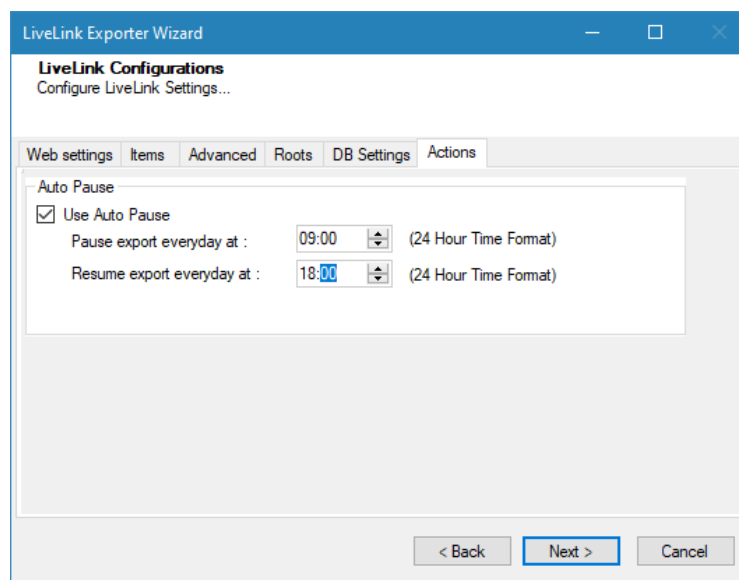


**Figure 2-9: LiveLink Configurations Screen – Actions Tab**

**Table 2-9: LiveLink Configurations, Actions Tab - Description of fields**

| Field | Description |
|---|---|
| Auto Pause | |
| Use Auto Pause | To use the auto-pause and resume feature, select this option. To turn off this function, uncheck this box. |
| Pause export every day at | Set the daily time that the export process should pause. |
| Resume export every day at | Set the daily time for restarting the interrupted export operation. |

The settings for actions are only applied to this exporter instance that is currently executing when the user clicks the **Next** button.

3.  Click **Next**. The Folders screen appears.

    Tzunami Exporter provides quick analysis option before exporting to know the size, count of contents inside selected folder.

    If you want to analyze the content: Check on the Folder(s) in tree view, then **Analyze** button is enabled. Click **Analyze**.
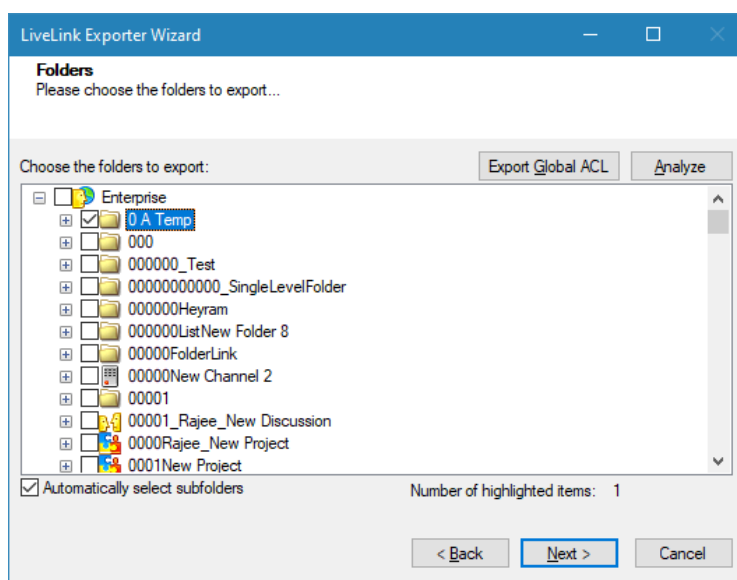


**Figure 2-10 Analyze Option**

Please, provide the database connection settings prior to perform the content analysis. Refer **DB Settings tab** section.

Analyzer screen appears. Analyzer screen provides the detail information that helps to plan for the export (chunk size) based on File size and number of items.
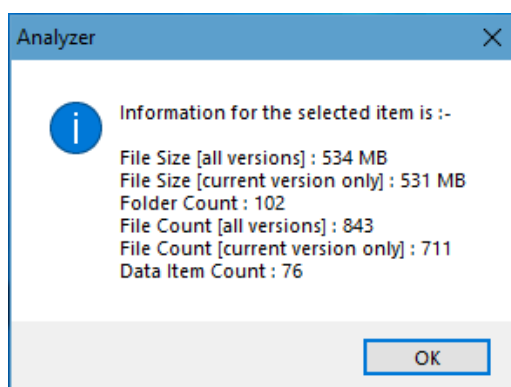


**Figure 2-11 Analyzer Information**

**Table 2-10 Analyzer Information Description**

| Field | Description |
| --- | --- |
| File Size [all versions] | Provides the total size of files for all versions of documents. |

| Field | Description |
|---|---|
| File Size [current version only] | Provides the total size of files for current version of documents. |
| Folder Count | Provides the number of folders. |
| File Count [all versions] | Provides the total number of files for all versions of documents. |
| File Count [current version only] | Provides the total number of files for current versions of documents. |
| Data Item Count | Provides the total number of data item. |

You can export the Roles, Groups and Users in a file by clicking on **Export Global ACL** button. A progress bar appears while exporting the information. The file is by default exports to:

**Location:** C:\ProgramData\Tzunami\GlobalAclExport\LiveLink

**File Name:** global_acl.xml

This file is used in Tzunami Deployer when using Global ACL Mapping. Refer **Deployer User Guide's** section **Global ACL Mapping** for more details.
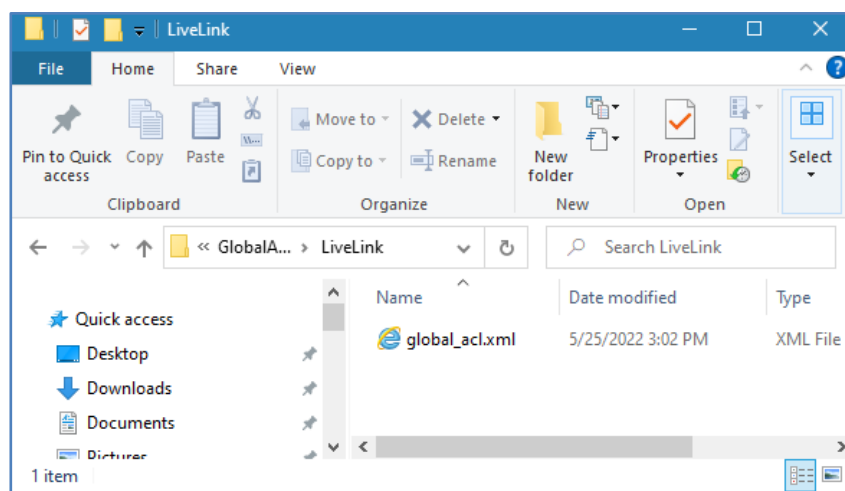


**Figure 2-12 Global ACL Mapping file**

4. Select folders to export.
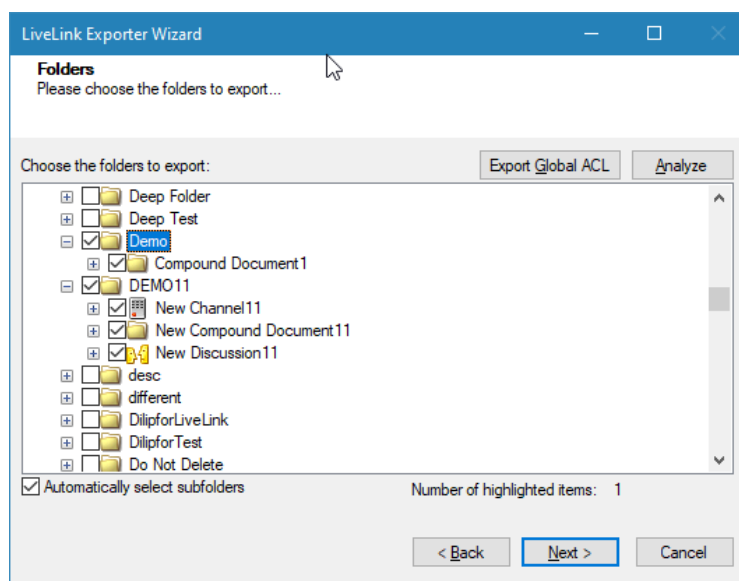


**Figure 2-13 Folders Selection Screen**

You can select all subfolders of a selected folder by checking **Automatically select subfolders**.

5. Click **Next**. The Filter screen appears.
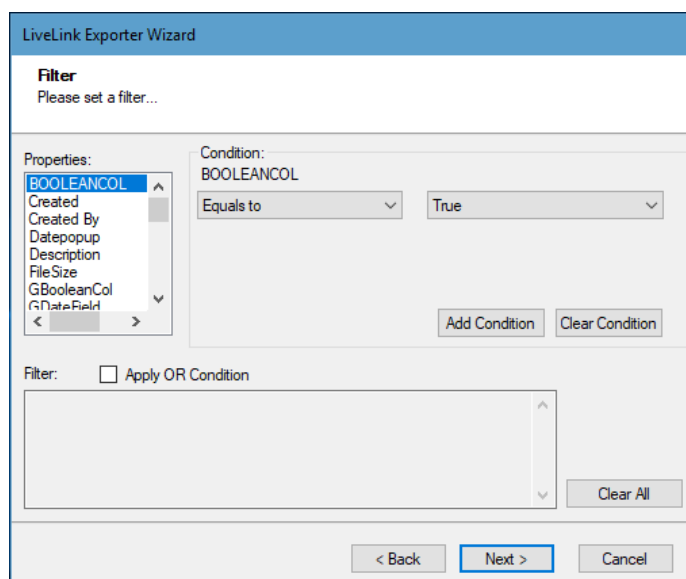


**Figure 2-14: Filter Screen**

6. Set up filtering as follows:

   a. In the Properties field, select a property.

   b. In the Condition field, select a condition from the dropdown list and enter or select values in the corresponding field.

    c.    Click Add Condition. The condition is added to the Filter area, displaying the full filter expression.

You can only add one condition per property.

You can edit a condition for a property by selecting the property and modifying the condition type or values that are currently assigned to it.

You can remove a condition from a property or all the conditions from all the properties by clicking **Clear Condition** or **Clear All**, respectively.

This option works only for Data Items.

If multiple conditions are applied, only items that match all conditions are exported.

While adding filter condition for a file size using the Size property, you have to enter file size value in bytes.

7.    Click **Next**. The Destination Folder screen appears.



**Figure 2-15: Destination Folder Screen**

Specify where to export the files and generated TDX information. Make sure you are saving to a folder with a descriptive name and under a well-organized file system hierarchy. It is recommended to export to a folder that is as close to the root as possible.

When exporting deep hierarchy, the property which store the path for exported folder/files may exceed the maximum character supported by the property (typically 260 characters defined in the Windows API). To overcome such condition, it is recommended to export to a folder that is as close to the root as possible.

Starting in Windows 10, version 1607, MAX_PATH limitations have been removed from common Win32 file and directory functions. Please, refer information published by Microsoft from following link and consult with your system administrator to remove the limitation whenever possible.

Click **Save** under **Export specification file** for saving export specification details as an XML file which can be used to run the exporter in command-line mode. See the section '**Command-line Export**' below for more details.

8. Click **Next**.

If the export folder already exists, a warning appears, informing you that the destination folder already exists and if you continue all existing information will be deleted.

Clicking **OK** confirms overwrite and clicking **Cancel** returns you to the Destination Folder screen to change the destination folder.

An Exporting screen appears with a progress bar and execution report, and the export process begins. During the export process, a **Pause** button is displayed. Users can manually pause and resume the export process (despite of scheduled pause/resume time) by clicking on **Pause/Resume** button.
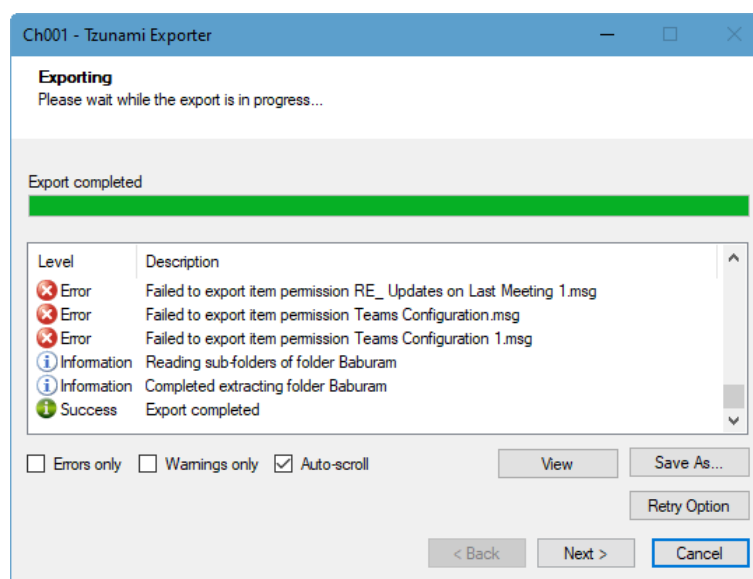


**Figure 2-16: Export Progress Screen**

You can save the export report by clicking **Save as…** after export is complete.

You can check **Auto-scroll** to display the latest progress messages, as they appear

You can display only export errors by checking **Errors only**.

You can display only export warnings by checking **Warnings only**.

9. Click Retry Option, if there are failed item(s).

10. Click **Next**. The Export Complete screen appears.

11. Click **Done**. The Tzunami LiveLink Exporter wizard is closed.

After the extraction process completes successfully, you are prompted to load the exported data into the current Tzunami Deployer project. Clicking **Yes** begins the process of loading the content from the previously exported TDX file into the project. For more information about loading sources, refer to the *Tzunami Deployer User Guide*.

## 2.3 COMMAND-LINE EXPORT

Tzunami Exporter for LiveLink provides ability to run export sessions non-interactively using command line instructions. This allows administrators to plan and schedule long running migration jobs through scripts, batch files and schedulers according to needs and organizational timetables. To run the exporter in batch mode you will need exporter specification file explained in the 'Choose Destination Folder' step of the export wizard. The file contains all the export option details including:

- Source ECM connectivity information (Server Address, User Name, Password etc.)
- Items to export
- Destination and Log Folder
- Filter
- Exporter specific options

This file can be edited to suit your needs however the XML schema of the file should not be altered. It is recommended that you generate a sample specifications file in the Destination Folder Screen selection step of the export wizard and use it as a template to create your own specification file.

Once the specification file is ready, you can run the exporter from command line using command:

**TzunamiExporter.exe [-r *<ResultFile>*] -s *<ExportSpecificationsFile>***

**Usage**

| Field | Description |
|-------|-------------|
| -r | Outputs export results into an XML file [Optional] |
| -s | XML file containing export specifications |

**For example**:

C:\User\Administrator> "C:\Program Files (x86)\Tzunami\Deployer 4.0\Exporters\LiveLink\TzunamiExporter.exe" -s  "D:\Spec Files\specs1.xml"

C:\Program Files (x86)\Tzunami\Deployer 4.0\Exporters\LiveLink> TzunamiExporter.exe -s "D:\Spec Files\specs1.xml"

Based on your needs you can create number of specification files and use them to run multiple export sessions as batch commands.

In Microsoft Windows 10, Windows 8, Windows 7, Windows Vista, Windows Server 2003/2008/2012 and environment, if USG (Universal Security Group) is enabled, Users with low privileges sometimes cannot export ECM contents. To export contents using command line, User must run with elevated or administrative privileges.

To export contents with elevated or administrative privileges, you can run the exporter from command line using command:

**RUNAS /trustlevel:"Unrestricted" "<ExporterInstallationDirectory>\TzunamiExporter.exe" –s "<Spec file path>\Specfilename.xml "**

**For example**:

RUNAS /trustlevel:"Unrestricted" "C:\Program Files (x86)\Tzunami\Deployer 4.0\Exporters\LiveLink\TzunamiExporter.exe"  -s "D:\Spec Files\specs1.xml"

## 2.4 LOGGING SETTINGS

In Tzunami Exporter, log is written in a persistent medium having as much information as possible about events that occur while the software runs. That information plays a vital role while diagnosing if any issue occurs during the export process. Hence, it is worth mentioning that logger writes each and very details during.

Tzunami Inc provides the settings for writing logs. There are the following log levels that the user can change before running the tool.

1. Go to installation directory of the exporter and open **TzunamiExporter.exe.config** file in an editor.

2. Locate the key and set corresponding values as mentioned below:

   - **LogLevel:** Set the esteem to "Debug" or "High" or "Normal" or "low" or "none".
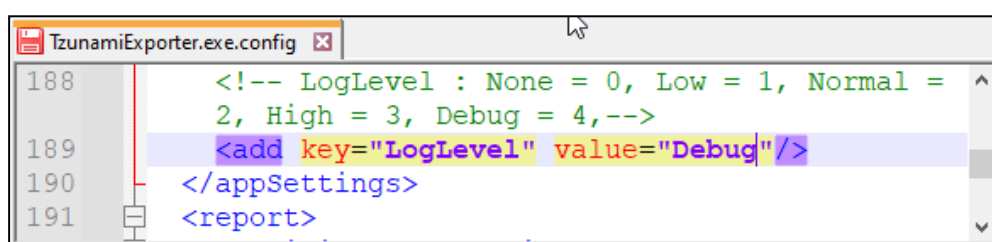


**Figure 2-17 Log level Settings**

   - **Debug:** Writes logs as much as possible. So, this setting includes the maximum level of verbosity. By default, the tool is packaged with this setting.

   - **High:** Writes logs as much as possible for warnings and errors. However, it will not log possible diagnostic information.

   - **Normal:** Writes logs for anticipated errors and warnings.

- **Low:** Critical errors are logged. There will be as low as possible information logged.

- **None:** No such logs are written.

3. Save the file. Then run the exporter.

## 2.5 AUTO PAUSE ON ERROR AND RESUME

Tzunami Exporter incorporates a highlight to delay and continue when it experiences the errors. The exporter is delayed when expected error occurs persistently and after a few indicated time, the method continued from the held up point. It is accepted that amid the paused time, the issue can be settled so that exporter will continue rather than commandingly ending the method and reexporting once more. Client has to set a few parameters to take this highlight some time recently running the exporter. To set the parameter, perform the following steps:

1. Go to installation directory of the exporter and open **TzunamiExporter.exe.config** file in an editor.

2. Locate the  keys and set corresponding values as mentioned below:

- **IsPauseFromError:** Set the esteem to "true" to utilize this include.

- **ErrorRetry:** set the esteem to a number. When an expected errors happens to the desired number of times, at that point the exporter is stopped.

- **ResumeAfter:** set the esteem to a number. The exporter tries to trade from the ceased point and in case same issue persists it'll stop once more, something else it'll proceed ahead.

- **RetryOptionAutoRetry:** set the esteem to a number. Exporter will auto retry to trade prepare in the event that it falls flat. After the required times, the process is ended detailing the errors.

```
183        <!-- Set value for ResumeAfter in Minute-->
184        <add key="ResumeAfter" value="3"/>
185        <add key="ErrorRetry" value="5"/>
186        <add key="IsPauseFromError" value="true"/>
187        <add key="RetryOptionAutoRetry" value="2"/>
```
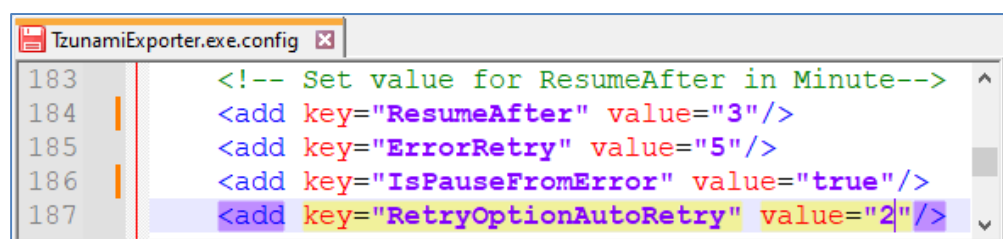
**Figure 2-18 Auto Pause and Resume Settings**

3. Save the file. Then run the exporter

## 2.6 BEST PRACTICE

Due to the technological differences between  and SharePoint, the following best practices should be taken into consideration

- Migrate folders to their relative list types, based on the items in those folders.

**Table 2-11: Target Structure Guidelines**

| LiveLink Item Type | Relevant SharePoint Types |
|---|---|
| Workspace | • Site Collection<br>• Site |
| Channel | Announcements List |
| Discussion | Discussion Board |
| Project | • Site Collection<br>• Site |
| Task List | Tasks List |
| Task Group | Folder inside a Tasks List |
| Compound Document/Binders | Folder |
| URL | • Link inside a Links List<br>• Document inside a Document Library (with the Link to a Document Content Type) |
| Alias | • Link inside a Links List<br>• Document inside a Document Library (with the Link to a Document Content Type) |
| Document | Document inside a Document Library |
| Text Document | Document inside a Document Library |
| Generation | • Link inside a Links List.<br>• Document inside a Document Library (with the Link to a Document Content Type) |
| Folders | Depending on the content of the folder, valid options may include migrating as Lists, Folders, or even Sites |
| Community | Team Site |
| Library | • Document Library<br>• Folder |
| Mail Archive | • Document Library<br>• Folder |
| Mail | • Documents<br>• Item |
| Blog | Blog Site |
| Blog Entry | Posts |
| Blog Comment | Comments |

| LiveLink Item Type | Relevant SharePoint Types |
|---|---|
| FAQ | • List<br>• Discussion Board |
| FAQ Entry | • Item<br>• Topic |
| Forum | Discussion Board |
| Forum Topic | Discussion Board |
| Email Folder | • Document Library<br>• Folder |

- URLs and Aliases can be migrated in two ways:

  - Migration as data-items in a Links List.

  - Migration as documents in a Document Library. Office 365 or SPS2013/SPF2013 or SPS2010/SPF2010 or MOSS/WSS3.0 provides a Content Type named Link to a Document, which functions in a similar way to a shortcut. For more information about migrating using this Content Type, please contact the Tzunami Support Team, at support@tzunami.com.

    Attributes (derived from Categories or from Additional Node Attributes) can be added to the items as part of the deployment. Note that in LiveLink, each item can be assigned several categories while in Office 356 or SPS2013/SPF2013 or SPS2010/SPF2010 or MOSS/WSS3.0 each item can only have one Content Type. For more information about adding attributes, refer to the *Tzunami Deployer User Guide*.

    Top-level folders should be deployed as Sites and Sub-sites, in order to better organize the content in a SharePoint-oriented structure.

# 3 AUTO MIGRATION PLAN

**Tzunami Deployer** uses the Migration Plan file and Specification file to schedule auto migration Deployer projects. These files are created by **Tzunami <ECM> Migration Planner** tool. This tool opens the respective ECM exporter. To create Migration Plan and Specification files, perform the following steps:

1. Run the **Tzunami <ECM> Migration Planner** from start menu, for example, here, Livelink exporter is started.
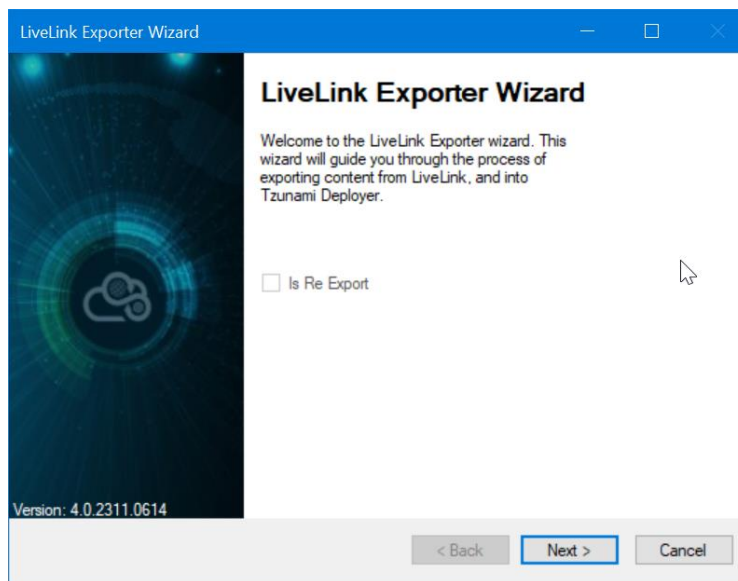


**Figure 3-1 ECM Source Connection Screens**

2. Select the required options
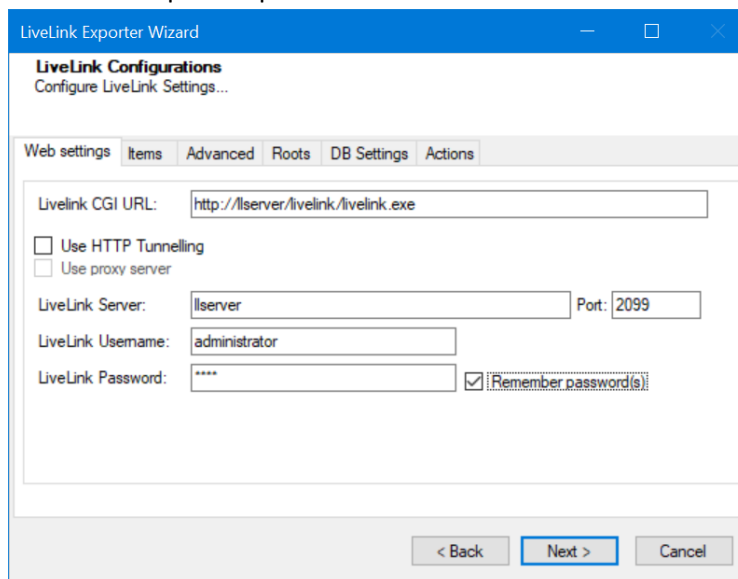
## LiveLink Exporter Wizard

**LiveLink Configurations**
Configure LiveLink Settings...

Web settings | **Items** | Advanced | Roots | DB Settings | Actions

☑ Export items versions
☑ Export Personal Workspaces
☐ Export Email Volume
☐ Export Renditions

Types:
☑ Discussions (Topics & Replies)
☑ Compound Documents
☑ Channels & News
☑ Tasks & Milestones
☑ Projects
☑ Documents
☑ Text Documents
☑ Aliases
☑ URLs
☑ Compound Emails
☑ Generation
☑ Binders
☑ Business Workspace

[ < Back ] [ Next > ] [ Cancel ]

---

## LiveLink Exporter Wizard

**LiveLink Configurations**
Configure LiveLink Settings...

Web settings | Items | **Advanced** | Roots | DB Settings | Actions

☑ Export attachments
☑ Export security settings
☐ Export Audit Trail
☐ Export Multi-Value properties as text
☑ Export Additional Node Attributes
☑ Export Categories & Attributes
  ☐ Merge values for attribute sets
☐ Export Record Management Attributes
☐ Export URLs and Aliases as files of type:    HTML
☐ Export Generation as files of type:    HTML

[ < Back ] [ Next > ] [ Cancel ]

---

## LiveLink Exporter Wizard

**LiveLink Configurations**
Configure LiveLink Settings...

Web settings | Items | Advanced | **Roots** | DB Settings | Actions

Additional items to be used as roots :

314482

[ < Back ] [ Next > ] [ Cancel ]

**Figure 3-2 ECM Source Export Options Screens**

Click on **Next** button.

3. Source and Target Mapping wizard opens. In the left side, source folders/subfolders are displayed in tree structure. Select the folders/subfolders for migration in a chunk. In the right side, enter the Target SharePoint URL and connect. The Target SharePoint is loaded in the tree view. Select site or subsite or Library or List as root of deployment.
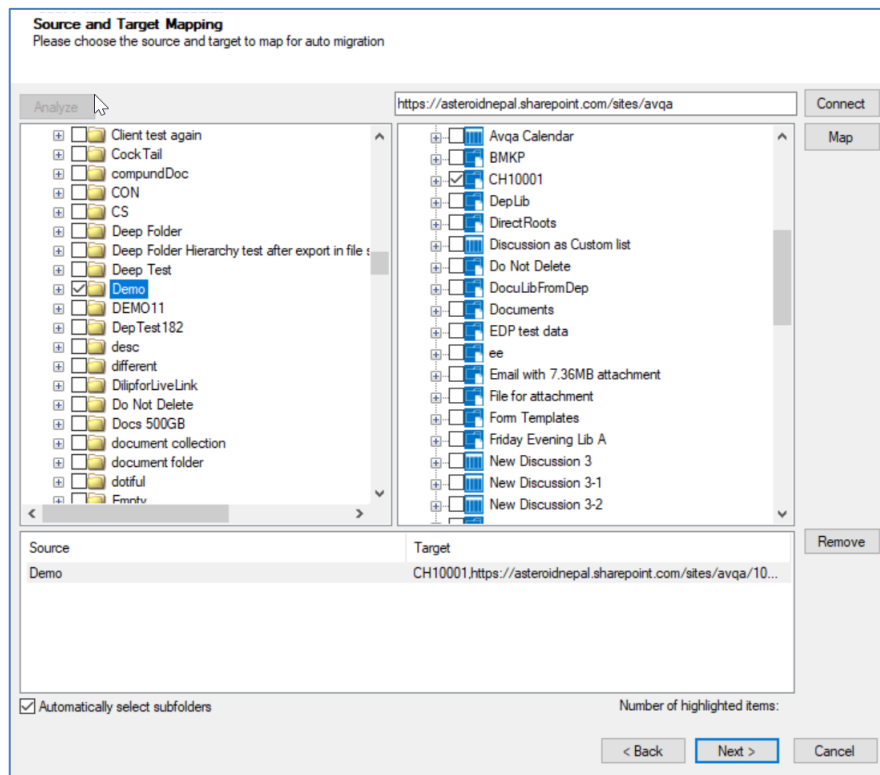


**Figure 3-3 Mapped Source and Target screen**

Click on Map button. You will see the mapped source and target root for migration. You can remove the mapped source and target. you can check/uncheck the check box to select or not for subfolders in source automatically.

After mapping, click on **Next** button.

The migration plan file will create number of rows based on the folders selected in this tree view. You should expand the root folder and select the subfolders wisely so that migration plan file will have manageable number of jobs created.

4. In the Property Mapping screen, select the source and target property and click on **Map** button to map properties. If you want to create source property in target, the select the source property and click on **Add** button.



**Figure 3-4 Property Mapping Screen**

After completing property mapping, click on **Next** button. Multiple property mapping screens may appear, complete mapping as required.

5. In the Security Mapping screen, enter the site collection URL and click on **Load[Service]** button.

    a. Entities Tab: Select the user and group from source and target, then click on **Map** button. The mapped users and groups are displayed the bottom panel. The Users and Groups check boxes help to filter users and groups quickly. The filter text helps to find the relevant items quickly in source, target and mapped panels. Mapping source group to !<Create New Group>!, creates new group in target having group name as in source. You can remove the mapped group using **Remove** button. The **Suggest** button provides the best matching suggestion for mappings.



**Figure 3-5 Users and Groups Mapping**

    b. Roles Tab: Select roles from source and target, then click on **Map** button. The mapped roles are displayed the bottom panel. You can remove the mapped group using **Remove** button. The **Suggest** button provides the best matching suggestion for mappings. The filter text helps to find the relevant items quickly in source, target and mapped panels.

**Figure 3-6 Roles Mappings**

After mapping users, groups and roles, click on **Next** button.

6. In Project Options screen, provide the location to create auto migration plan files.

   The Project folder holds Auto Migration csv, Auto Migration created Deployer Project and Exported TDX information and extracted files. Deployer project name and exported folder name will be auto created. Please use a folder close to the drive root to allow deep hierarchies and long file names.



**Figure 3-7 Creating Migration Plan Screen**

Check the following check boxes and set date time for:
- Use Migration API: check this option to use the migration api in auto migration project.
- Start Verification after migration: check this option to use the migration verification feature right after completing the migration.
- Schedule Date and Time: set the date and time for auto migration project to start.

After completing, click on **Done** button. If confirmation for location to create is displayed, click on **Yes** button.

The required files are created in the provided location under **Plan** folder. The folder contains following file formats:

- .csv : This is the Auto Migration Plan file. It  stores all the information required to create the auto migration project in Tzunami Deployer later on along with all other information about source, target and schedule time. This file needs to imported in Tzunami Auto Migration Manager to schedule and execute the migration.

- .xml : This is the specification file. This file includes all the information required to extract the data from source server during auto migration. It stores the hierarchy selected for migration along with connection parameters, credentials (in encrypted form), Tzunami Exporter options and other filter parameters as specified during creation of migration plan file.

# 4 ANNEX

## 4.1 EXPORT ADDITIONAL DOCUMENT METADATA DIRECTLY THROUGH DATABASE.

**Tzunami Livelink Exporter** uses the Livelink APIs to extract and export the Item metadata. Generally, the metadata extracted through APIs includes all necessary metadata and associated value that can be observed through livelink interface.

However, Livelink database may store additional information in the database which cannot be extracted through APIs or in some cases cannot observe in Livelink interface as well. For example: Last Accessed date can be fetched from LiveLink using a SQL query on a LiveLink table, it doesn't exist as a separate document metadata field.

**Tzunami Livelink Exporter** provides added feature to extract such metadata. Further, the Livelink database should be accessible from the network where **Tzunami Livelink Exporter** is installed and database information and credential having privileges at least to execute query and fetch data are required. This information should be provided in **Tzunami Livelink Exporter**. For more details, please refer to **DB Settings Tab** section on page **2-25.**

### To specify the Metadata and SQL Query

You need to carry out the following steps to add the Additional Document Metadata.

1. Open **PropertyQueryList.xml** file in edit mode from the Livelink Exporter installation location.
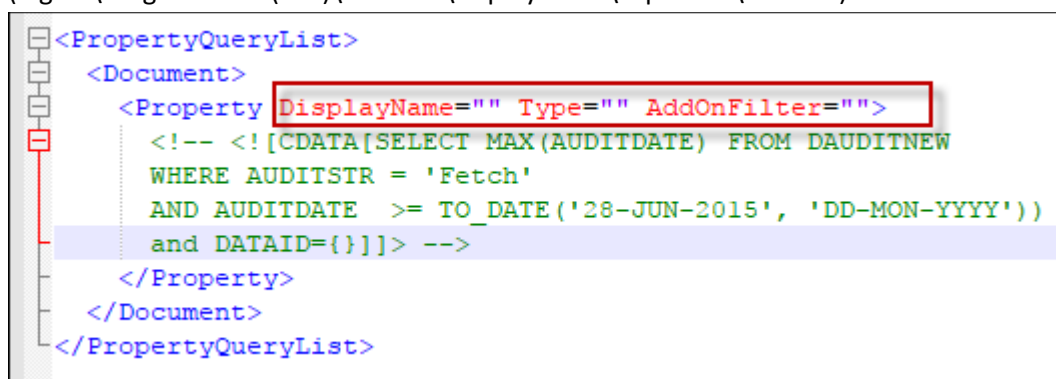   (e.g. C:\Program Files (x86)\Tzunami\Deployer 4.0\Exporters\LiveLink)

```
<PropertyQueryList>
  <Document>
    <Property DisplayName="" Type="" AddOnFilter="">
      <!-- <![CDATA[SELECT MAX(AUDITDATE) FROM DAUDITNEW
      WHERE AUDITSTR = 'Fetch'
      AND AUDITDATE  >= TO_DATE('28-JUN-2015', 'DD-MON-YYYY'))
      and DATAID={}]]> -->
    </Property>
  </Document>
</PropertyQueryList>
```

**Figure 4-1 Property Query Settings in Configuration file: Locate**

The **PropertyQueryList.xml** file provides **Document** node, under which additional metadata should be specified as **Property** node(s). Each **Property** node has **DispalyName**, **Type** and **AddOnFilter** atrributes whose value should be configured.

2. The **Property** node should include values for **DisplayName** for a metadata, **Type** for data type of the metadata.
   The property node includes **AddOnFilter** attribute with default empty value. This property provides additional capability to use the newly added metadata in Exporter Filter when its value is set to **"true"**.

**Figure 4-2 Property Query Settings in Configuration file: Set Key-Value**

3. Add the SQL Query for the property. SQL Query should include "{}" placeholder for 'dataId' in WHERE clause. The value for 'dataId' for data item will be included in query at runtime.



**Figure 4-3 Property Query Settings in Configuration file: Update Query**

4. Save and close the file.

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For further information, you can contact Tzunami Inc. at:

Tzunami Inc.

601 108th Avenue, NE

Suite 1900

Bellevue, WA 98004, USA

Email:      sales@tzunami.com, support@tzunami.com

Web:       http://www.tzunami.com