TRAINEE WORKBOOK

Atlas 6.0 for Microsoft Dynamics AX2012

Upload system
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Reader comments
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1 INTRODUCTION

1.1 Welcome
Training is a vital component of retaining the value of your Atlas investment. Our training keeps you up-to-date on your solution and helps you develop the skills necessary for you to fully maximize the value of your investment.

1.2 About this course
This course provides you with a general introduction to the Atlas upload system. This introduction includes:

Course description
This instructor-led course provides students with the knowledge to use the standard functions of the Atlas upload system. The course focuses on the main uploading functions and demonstrates each in isolation and in context. The course includes explanations of how to use the Atlas ribbon bar, data sources, task panes, and various template building options.

Audience
This course is intended for all students who wish to learn about the Atlas uploading system and its functional application in accomplishing business objectives.

Pre-requisites
It is expected that students have completed the Atlas introduction to reporting class, and they have a moderate understanding of Microsoft Excel, familiarity with tables and fields in databases, and the general idea behind data cubes. General navigation through and a foundation understanding of Microsoft Dynamics AX2012 is also needed.

1.3 Course Objectives
The objective of this course is to provide you with the ability to:

- Understand and navigate the upload system using the Atlas ribbon and task panes
- Design and build upload templates
- Select template fields and property values
- Run an upload template
- Understand the differences between the add or change style templates and the journal style templates
- Understand the matrix style of uploading
- Understand what is meant by an Atlas batch
- Build a batch including the use of templates and other batch actions
- Use a batch to perform split uploads
2 UPLOAD SYSTEM OVERVIEW

2.1 Outline and Objectives

The purpose of this chapter is to get you started with the Atlas upload system. This will involve understanding the Atlas ribbon bar and the task panes so that you can use the upload functions.

At the completion of this chapter, you will

- Know where to access the Upload icon and open the Upload task pane
- Understand source data must be made available prior to building a template
- Be introduced to the four primary upload functions
  - Append
  - Update
  - Find + Replace
  - Journal
- Realize either new templates or template snippets must be mapped to a document prior to uploading
- Have a feel for the basics of running an upload
- Have been introduced to the Batch tasks upload function
2.2 The Atlas Ribbon Bar

Instructions for logging in and out of the Atlas client were explained and illustrated in the Atlas Introduction to Reporting class. After you have logged into Atlas and opened an MS Office document, you will see the Atlas tab which appears in the upper right. Click the tab to open the Atlas Ribbon Bar.

1. Log in to the Atlas client
2. Open Microsoft Excel
3. Click the Atlas 6.0 tab to reveal the Atlas icons on the ribbon bar

This Atlas upload class will focus primarily on the Upload icon in the Data group, which will allow an Atlas designer to build and run upload templates, as well as save templates as snippets (which were explained in the Atlas Introduction to Reporting class).

Note: Atlas does not disable any of the functions of its host Office application. As you can see all other Office application tabs remain visible, and operational.

2.3 Navigating the Upload Task Pane

1. Begin by opening a new excel worksheet
2. Data to be uploaded into a data source will reside in the body of the worksheet, typically within an excel table.
3. The Upload pane is positioned along the right margin
4. Templates contain instructions which will pass the source data from the worksheet to the specified data source(s)
5. If an Atlas template was inserted into a worksheet it would be displayed in the upload pane

In the example on the next page there are no document templates as the worksheet is brand new.
1) **New Upload** templates are created by clicking **Upload +**
   a. There are four **Upload Template** functions to choose from
      - **Append** – add new record(s)
      - **Update** - change existing record(s)
      - **Find + Replace – Delete** existing record(s), then **append** new records
      - **Journal** – uploads containing **Headers** and **Lines**
   b. There is one **Batch** upload function – uploads one or more templates in sequence (explained later in this class)

2) Alternately, an existing template **snippet** can be selected from a **workspace**
   a. Once a new template or snippet is mapped to a document and its field properties are set, the template can be run
2.4 Running an Upload

ATLAS 6.0 Basic Upload Example.xls

1) The basics of running an upload are as follows:

   a. Open the worksheet above which contains data to be uploaded

   b. Create a new template and map its fields to those in the worksheet

       In this case we’ll use the **Append** function to add new zip codes to the zip code table in AX2012R3

       **Assign a Named Range** to column E

   c. Navigate to the **Run Upload** pane

       Click the green **Run Upload** tab

   d. Upload **Results** are displayed

       In this case 10 new zip codes were **Inserted** into the zip code table

The next chapter will explain the details involved with template preparation
2.5 **Key points**

This section introduced the Atlas upload system.
In particular you learned:

- Atlas appears as a Ribbon tab in your Microsoft Office System applications
  - The ribbon bar functions will be disabled if you have not logged into Atlas.
- The Atlas upload icon can be found in the Data group of the Atlas ribbon bar
- Source data to be uploaded resides in a document, typically in an excel table in a worksheet
- Four primary Atlas upload functions are available (plus “Batch”)
  - Append – **add** new record(s)
  - Update - **change** existing record(s)
  - Find + Replace – **Delete** existing record(s), then **append** new records
  - Journal – uploads containing both **Header** and **Line tables**
- Templates are mapped to a document prior to uploading. These could be
  - New templates OR
  - Template snippets
- The basics of running an upload
- Use the Batch tasks to upload into multiple tables in a set sequence.
2.6 **Quick interaction**

Take a moment to write down the three key points you have learned:

1. 

2. 

3. 
3 WORKING WITH UPLOAD TEMPLATES

3.1 Outline and Objectives

The purpose of this chapter is to take you deeper into the creation and use of templates. It introduces you to the concept of upload templates, mapping these templates to your documents, running an upload and how you can re-use these templates with other documents.

When mapped templates are inserted into a document they become “in-document” templates. It is these that are used when the upload is executed. A template can be created from scratch or a re-usable template snippet can be inserted “in-document”.

At the completion of this chapter, you will:

- Understand what is meant by the term Template
- Understand the difference between an in-document template and a template snippet
- Understand how to use the upload system to transfer data from your Office document into Microsoft Dynamics AX
- Understand how to map data in your document to fields in a template
- Understand how to edit an in-document template
- Understand what happens when you run an upload
- Recognize upload error messages
3.2 What is an upload template?

A template is a set of instructions which identify the fields and filters in the target table in a data source and their mapping to a Microsoft Office document. New templates can be created directly in the document or can be selected from a library of template snippets saved in an Atlas workspace.

Create New Templates

After you select an upload function, assign a template title, select a target data source and table, and identify fields and filters, the create button in the Upload task pane will insert the template into the document. At this point the template will be known as an In-document template. You can proceed with mapping template fields and filters to the document, then run the upload.

Using Template Snippets

A template snippet can be created on its own and saved in an Atlas workspace. The snippet will contain pre-established data source, table, field, filter, values, and properties built in when it was designed. It will remain disconnected from the document you are working with, until you choose to select it in the Upload task pane. At that point, a copy of the template will be associated with the document and it will be known as an In-document template. You can then proceed with mapping upload and filter fields to the document, and run the upload. The original template snippet will continue to reside in the Atlas workspace.

Regardless of which technique you use, once a template is in document you can save the entire Office document and share it with other users. If they have Atlas installed and have suitable access rights to the target data source, they can use the upload system to transfer their data from the document into the data source.

3.3 Creating a New Upload template

To build a new upload template from scratch always follow these Five Main Steps...

1) Choose an Atlas upload function
2) Select a target data source and a primary table
3) Choose Field(s) and Filter(s) from the selected table
4) Map Field(s) and Filter(s) to the source document
5) Set Field properties

These five steps will be illustrated next...
Working with Upload Templates

ATLAS 6 Create New Template Example.xlsx

1) Choose an Atlas Upload Function

   a. Open the source document above which contains data to be uploaded
      We will upload data from Column D
   b. Click the Upload Icon from the ribbon bar to display the Upload pane
   c. Click Upload + to display the New Upload pane
   d. Click the Templates button if it is not already highlighted
   e. Double click one of the four Upload Template functions
      Append – add new record
      choose this one > Update - change existing record(s)
      Find + Replace – Delete existing record(s), then append new records
      Journal – uploads containing Headers and Lines
ATLAS 6.0 Create New Template Example.xlsx

2) Select a target Data Source and a Table

a. The Update pane appears
b. Enter an Upload title then click Next >
c. The Data Sources pane appears
   
   Select the target Data Source AX2012R3
   
   Click Next >
d. The Table pane appears
e. Select the target Table Order Pools
f. Click Next >
3) Choose Fields and Filters from the selected table

a. The Fields pane appears

b. Atlas presents a list of default fields as a suggestion

   Although not needed in this example ...you can

   Click Show all fields

   Search for additional fields, then select them

c. Click X to remove the Name field

d. Click Next >

e. The Filters pane appears, it is intentionally empty in this example...

   Click Create > to insert the template in-document

   The template title will be now visible in the subsequent task panes
4) Map Fields and Filters to the Source document

a. The upload Inspector pane appears
Note the Fields and Filters buttons at the top of the pane

b. Click the Fields button
Notice that Atlas highlights mandatory fields in the target table in red

c. Right click the Pool field
Choose =SalesPoolId to paste it into the upload value

d. Be aware of it but skip the Filters button, not needed in this example

h. Click Next > to expose the Run Upload pane
Toggle between the Fields and Filters buttons if needed to review entered values

continued...
Working with Upload Templates

i. One of the upload Fields in the template was assigned a Named Range value of SalesPoolId

j. Highlight cells D10-D13
Type SalesPoolId in the Name Box
(Do not assign named ranges to column headings or total rows in a source document)

5) Set Field properties

a. Return to the upload inspector

Left click the COG to the left of the Pool field
Tick Unique

b. Then click Next > to return to Run Upload

c. Field properties will be explained in Chapter 4
3.4 Upload Results

The Atlas upload system brings together a template and an Office document. After the five template building steps are competed, the template remains within the document if “Saved As” as any Office document. The document can then be opened by other Atlas users, and the upload can be run repeatedly.

ATLAS 6.0 Create New Template Example.xlsx

1. The title of the In-document template appears at the top of the Run Upload pane

2. Double click Run Upload to validate and upload the records
   a. The number of records Inserted, Updated, and/or Deleted are displayed in the Results pane
   b. Upload complete appears within the Results pane

3. If an upload encounters an error,
   a. Record counts will be zero and highlighted in red
   b. Error messages will be displayed
3.5 Using Template Snippets

As you learned in the reporting class, in the process of creating queries an Atlas designer has the option of saving them as Snippets in an Atlas Workspace. The same is true for templates. Template snippets can be saved when using any of the Atlas Append, Update, Find + Replace, Journal, and Batch functions.

A template snippet which contains pre-established data source, table, field, filter, values, and property profiles can be selected from a workspace and a copy can be inserted into a document. While selecting a suitable template snippet to match the document and before running an upload, the Atlas designer must double check the mapping of Fields and Filters to the document, as well as Field properties. After running an upload, the original template snippet will continue to reside in the Atlas workspace.

Recall from the reporting class that saved snippets are used when you want to:

- Make a template portable in your organization
- Re-use a template as a component in different documents or presentations
- Provide re-useable instructions to users who only have standard licenses (they cannot build Atlas documents, only run them)
- Mask the complexities of building a template from users to avoid potential errors

To use a template snippet to run an upload...

1) Select a template snippet from a workspace
2) Add or remove Field(s) and Filter(s)
3) Map Field(s) and Filter(s) to the source document
4) Check Field properties
5) Run the upload

These five steps will be briefly reviewed...
1) **Select a template snippet from a workspace**

a. Open a source document which contains data to be uploaded

b. Click the **Upload** button from the Atlas ribbon bar

   **Click Upload +** to display the **New Upload** pane

c. Click the **Snippets** button

   Select **John’s Workspace** from the drop down list

   Click the **Update Sales Pool Numbers** snippet to insert it into the document

d. Click **Next >**
2) Add or remove Field(s) and Filter(s)

a. The upload Inspector pane appears

   The active Atlas function is displayed (in this case “Update”)

b. The source data sheet determines the needed fields and filters

   *We have what we need in this example, however*...

   Toggle between the **Fields** and the **Filters** buttons and get familiar with...

   Right clicking and to **Remove field(s)** OR

   Clicking **Add More** then **Show all fields**

   Ticking additional field(s)

   c. In this example we wish to update only the **Pool** field
3) Map Field(s) and Filter(s) to the source document

a. While still in the upload Inspector...
   Click the Fields button
   Ensure a named range is selected for the field

b. Ensure a corresponding named range is entered in the upload column of the source document

c. No Filters are used in this example
4) Check Field properties

a. From the upload inspector

   Left click the COG to the left of the Pool field
   Ensure Unique is checked

b. Then click Next > to return to Run Upload

c. Field properties will be explained in Chapter 4
5) **Run the upload**

- a. Double click **Run Upload** to validate and upload the records
- b. An **Upload complete** message appears in the task pane
- c. In this example 4 sales pool numbers were **Updated** (changed)
3.6 Key points

The purpose of this chapter was to take you deeper into the creation and use of templates. It explained

- How to use the upload system to transfer information from a source document into a data source
- Templates can be built using any of the Atlas Append, Update, Find + Replace, Journal, and Batch functions.
- A template is a set of instructions containing the following upload information:
  - Target data source
  - Target table
  - Fields
  - Filters
  - Values
  - Field properties
- How new templates can be created directly “in document”
- How to map data in your document to fields in a template
- What happens when you run an upload
- How to recognize upload error messages
- Once a template is “in document” you can save the entire Office document and share it with other users.

Furthermore, you learned:

- The difference between an in-document template and a template snippet
- Template snippets can be built and saved when using any of the 5 Atlas upload functions
- A template snippet contains the full set of upload instructions described above
- Template snippets can be selected for use from an Atlas workspace and a copy can be inserted into a document

And the advantages of template snippets...

- Snippets are portable in your organization
- Snippets are re-usable as components in different documents or presentations
- Provide re-useable instructions to users who only have standard licenses (they cannot build Atlas documents, only run them)
- Mask the complexities of building a template from users to avoid potential errors
3.7 Quick interaction

Take a moment to write down the three key points you have learned:

1. 

2. 

3. 

4 SETTING UPLOAD FIELD PROPERTIES

4.1 Outline and Objectives

In addition to selecting upload fields for a template, each of them have field properties which must be set. When selecting template fields an Atlas designer must consider the source data to be uploaded, the design of the target table(s) and data source(s), and the Atlas function selected. Taken together these three considerations will dictate how the properties of each field in a template must be configured.

Upload Templates are typically validated when they are run, at which time the target data source and table requirements for field properties are compared to those in the template. When validation occurs without errors the upload is complete. Within complex templates, incorrect properties often contribute to initial upload errors. In more fundamental templates, default properties are typically sufficient to complete an upload.

A major reason for using templates is that they provide a mechanism for an Atlas designer to pre-set field properties to facilitate the upload process. These pre-sets can be used to reduce the input burden on the end user prior to run time.

All Fields in a template must be assigned one of six Field Types:

- Value
- Incremental
- Number of columns
- Parent field list
- Child field list
- Reference field

There are 7 additional field properties whose use depends on the data source and the designer

- Reference field
- Visible
- Number sequence
- Unique
- Mandatory
- Skip zero
- Disable
- X++ Table method

At the completion of this chapter, you will understand

Why field properties are needed in upload templates
The different types of field properties
The mechanics of adding field properties
4.2 Navigating the Field Properties pane

After upload Fields have been added to a template and mapped to a source document their properties must be examined. Field property settings for a template are maintained through a pop up pane. From the upload Inspector, click the Fields button at the top of the task pane, then left click the COG to the left of each field. There are two optional techniques for navigating the field properties pane, see the narrative below:

1) Open the upload Inspector, and click the Fields button at the top of the task pane
   Left click the COG to the left of any field, a pop up pane appears
   Click the small down arrow to the right of the field name displayed at the top of the pane
   Notice all of the template fields appear in the drop down list

2) Click up or down this list... OR toggle through the template field list using right and left arrows
   Choose each field and review or change its properties
   The nominated field is displayed at the top of the pane
   When you click or arrow to the next field any changes are automatically saved
4.3 Selecting Upload Field Types

The upper portion of the field properties pop up pane contains buttons for six Field Types. As mentioned the source data to be uploaded, target table(s) and data source(s), and the Atlas function in use will influence the selection of properties for each field in a template. Most often these types will be used with AX data sources and the Atlas journal function.

Value

For most fields, in the Upload value box choose one of these three methods (as explained in the reporting class)...

1. Enter a Named Range (prefixed with =) and map it to a column in the worksheet
2. Use the “Lookup in data source” magnifying glass or manually enter a Literal value
3. Use the Atlas Pick shortcut to establish a Cell Reference (ie =$D1)

An Upload value is entered for most upload fields for AX target data sources and any of the Atlas upload functions. For these fields it is recommended to use the Named Range method to enable an optional template snippet to be portable across documents. Note: Filters for Atlas Update and Find + Replace templates can only use this field type of Value.

Incremental (line numbering)
Incremental is typically used with AX data sources and the Atlas journal function, as well as any other upload template whose source document contains multiple lines. Using this field type you do not need to include line numbers in the source document, as lines will be automatically numbered. The Start value entered is applied to the first line in the source document during upload, for example...

Enter a Start value of 1, during upload...
Second line is 2
Third line is 3

Enter a Start value of 10, during upload...
Second line is 11
Third line is 12

**Multi Columns**

Use this Field type if a source document contains multiple columns which will be transposed into multiple rows in a target data source. It is typically used with AX data sources and the Atlas journal function, as well as any other upload template whose source document contains multiple...
Setting Upload Field Properties

Columns. For example 12 date columns might appear in a worksheet for the upload of an annual budget. After upload AX will display these budget columns as 12 rows.

To accomplish this click the COG to the left of the **Date** field in the template, click the **Field Type MultiColumns**, and enter **12** in the **number of columns** field. Repeat this process for the **Transaction currency amount** field. Atlas will create 12 value boxes for each field and present them in the upload Inspector. Next, enter 12 named ranges for each of these two fields and map them to the source document. After running the upload AX will display the monthly budgets in rows. A further breakdown of this example will be presented in Chapter 7 of this class.

**Parent field**

This property is typically used with AX data sources and the Atlas journal function, as well as any other upload template whose **target data source requires header and line tables** be populated together. It allows you to point a field in the template line to the same field in the template header when running the upload. This feature can be used whenever any field is included in both the header and lines of a template, and you don’t want to identify the field value separately at the line level. An illustration follows:

ATLAS 6.0 Parent Field Example.xlsx

1) Click the **Upload** icon from the ribbon bar

2) **Right click** the in-document template and choose **Inspect** to display the upload Inspector

3) Click the **COG** to the left of the **Journal batch number** in the template **Journal lines**

4) Within the **Field types**, click the button **Parent field**
   
   Atlas presents a drop down list of all the template header fields

   Select the **Journal batch number** field to point it to the template lines

5) When running the upload

   Journal number sequence Gene_113 is applied to the line records
Setting Upload Field Properties

Child field

This property is typically used with AX data sources and the Atlas journal function, as well as any other upload template whose source document contains item dimensions. It allows you to point the “parent” Dimension No. field in the template line to the “child” Dimension No. field in the subordinate (joined) InventDim table in the template. AOT architecture requires this relationship to ensure a complete update of the item dimensions in the target AX tables. An illustration follows:

ATLAS 6.0 Child Field Example.xlsx

1) Click the Upload icon from the ribbon bar

2) **Right click** the in-document template and choose **Inspect** to display the upload Inspector

3) Click the COG to the left of the **Dimension No.** in the template **Journal lines**

4) Within the **Field types**, click the button **Child field**
   
   Atlas presents a drop down list of the subordinate fields in the joined InventDim table
   
   Select the **Dimension No.** field from InventDim to point it to the template lines

5) When running the upload
   
   Item dimensions from the source document will be uploaded to the counting journal created in AX
Setting Upload Field Properties

Reference field

This property is typically used with AX data sources and any of the Atlas upload functions, as well as any other upload template whose target table requires data from a field in another table that is not included in the template (hence the term “reference” field). Atlas extracts the foreign field value and passes it to the target table in the template using a pre-established snippet. Here is an example of obtaining the default financial dimension from the Vend Table and passing it through to the PurchTable in an upload template:

1) To create a new single cell text snippet as explained in the reporting class...
   a. Choose the AX data source and the VendTable
   b. Choose the Field DefaultDimension
   c. Choose the Filter Vendor account
      
      Set the filter named range to $OrderAccount
      
      This Filter named range maps the snippet to the Vendor Account field in the purchase order upload template
   d. Save the snippet in John’s Workspace
      
      Enter a snippet title such as “Extract Vendor Default Dimension”
   e. Next, set the properties of the Dimension field in the upload template...
1) Open the above file and click the **Upload** icon from the ribbon bar

2) The **Upload** pane appears along the right margin
   a. Right click the in-document upload template and choose **Inspect**

3) Locate **Dimension** and click the **COG** to the left of this field in the template
   a. Choose the **Field Type ReferenceField**
   b. Click the **Pick snippet** button
   c. Select the previously used **Workspace** from the drop down list
   d. Locate and double click the **“Extract Default Vendor Dimension”** snippet
   e. The Dimension **Value** is now “Set” to run the snippet

4) Click **Next >** then click **Run Upload**

5) The **Default dimension** is extracted from the **VendTable** and passed to the **PurchTable**
   a. The default dimension for a vendor appears on the purchase order
   b. This template can now be re-used for PO uploads for different vendors
4.4 Additional Upload Field Properties

Other properties are maintained elsewhere in the body of the field properties window and will now be explained:

Visible

This property can be used with any data sources and any of the Atlas upload functions. Click the Upload icon in the ribbon bar, then right click the in document template and choose Inspect. Within the upload Inspector, click the COG to the left of a field to display field properties. Un- tick Visible to mask the view of this field when running an upload. This prevents changes to designated field values as the field itself will not be displayed in the Run Upload pane. In this example the MainAccount field is masked.

Number sequence

This property is typically used with AX data sources and the Atlas journal function, as well as any other upload template whose target data source requires identification numbers be assigned to each upload. This is handled through number sequence codes which reside in an AX data source and are assigned to fields in a template by the designer, who can define which code to use for each field.

Number sequence codes are used in fields throughout most all modules in AX. Commonly used examples of fields requiring a number sequence code in an upload journal are Journal batch number and Voucher.
During upload the next available number stored against a sequence code in AX is assigned to each newly uploaded record. Atlas can capture this new number in the body of the document for analysis and reconciliation between the source and the target.

ATLAS 6.0 Number Sequence Example.xlsx

1) Click the **Upload** icon in the ribbon bar, then right click the in document template and choose **Inspect**. Within the upload Inspector, click the **COG** to the left of each field to display field properties.

2) For both the **Journal batch number** and **Voucher** fields in a journal template tick the **Number Sequence** box, and in the two subordinate fields...

   **Name**
   Enter the value of the desired Number sequence code from the AX data source

   **Voucher**
   Choose one of these options from the drop down list

   - **Every line** – a new number will be assigned to every line in a journal during upload
   - **In connection with balance** – a new number will be assigned to every journal line that balances (ie an offset account is identified). If no offset account exists for a journal line, the same number from the previous journal line will be assigned during upload.
   - **Once only** – the same number will be assigned to every journal line during upload. The next journal header and lines uploaded with this template will be assigned a new number.
Number sequence (continued)

Based on the number sequence code assigned to a template, it can be set to capture the next available AX generated number within the source document itself. To accomplish this configure two fields in the Upload Properties pane...

1) Click the Upload icon in the ribbon bar, then right click the in document template and choose Inspect.

2) Within the upload Inspector, click the COG in the upper right of the pane
   a. The overall template Upload Properties pane is presented
   b. Select Journal batch number from the Return field drop down box
   c. Pick a cell reference and paste it in the Insert cell field

3) Run the Upload and note the next available journal number is returned to the source document
**Unique**

This property is typically used with AX data sources and the Atlas Update and Find + Replace functions, as well as any other upload template whose target data source requires unique fields be identified in order to complete an upload. The key field for the target table in the template must be set to unique.

1) Click the **Upload** icon in the ribbon bar, then right click the in document template and choose **Inspect**.
2) Locate **Customer account** and click the **COG** to the left of this field. Tick **Unique**.

   *(AccountNum is the key field in the CustTable)*

*Note:* This property is also used in upload templates which include item dimensions, in which case each of the item dimension fields to be uploaded must be set to unique. For an example see Atlas 6.0 Child Field Example.xlsx

**Mandatory**

This property is typically used with AX data sources and any of the Atlas upload functions, as well as any other upload template whose target data source contains mandatory fields. Certain AX fields which are mandatory to complete an upload default to red in the upload Inspector task pane. In addition you can specify your own mandatory fields in a template by ticking this box. In either case if a value is omitted from a mandatory field an error message will occur at upload.
1) Open the file named above
2) Click the **Upload** icon in the ribbon bar
   a. Right click the document template
   b. Choose **Inspect** to open the upload **Inspector** pane
3) Atlas supplies a list of default fields for this incomplete template
   a. The designer can add or subtract fields from this list however...
   b. AX mandatory fields are highlighted in red and must contain values
4) Click the **COG** to the left of the **Invoice** field
   a. Tick **Mandatory** in the field properties pane
   b. The **Invoice** field is now highlighted in red
5) If the value box for the invoice field remains empty...
    ...the upload will produce an error
Skip Zero

This property is typically used with AX data sources and the Atlas journal function, as well as any other upload template whose target data source contains multiple lines. If a source document contains a blank, ",", or a "0" in one or more cells then these lines are omitted from the target table during upload. Skip zero can be used with any field that contains the values above, it is not restricted to monetary fields.

ATLAS 6.0 Skip Zero Example.xlsx

1) Open the file named above
2) Click the Upload icon in the ribbon bar
   a. Right click the in document template
   b. Choose Inspect to open the upload Inspector pane
      Click the COG to the left of the Debit field
      Tick Skip zero
   c. Repeat for the Credit field
Setting Upload Field Properties

Disable

This property is typically used with AX data sources and the Atlas journal function. When ticked this property prevents the AX business connector from applying AX validation rules during upload for the selected field. In addition, validation for the entire template can be disabled through the Upload Properties pane. Disable is typically used temporarily when troubleshooting template errors in an AX test environment.

ATLAS 6.0 Disable Example.xlsx

1) Open the file named above

2) Click the **Upload** icon in the ribbon bar
   a. Right click the in document template
   b. Choose **Inspect** to open the upload **Inspector** pane

   Click the **COG** to the left of the **Account Type** field

   Tick to **Disable** (this field only)

3) In the upper right of the upload **Inspector** pane click the **COG**

   Tick to **Disable validation** (entire template)
**X++ Table method**

This property is typically used with AX data sources and any Atlas upload function. X++ method calls are used when you want AX to automatically set one or more AX field values during an Atlas upload, without your having to specify these values directly in the template. This increases the usability of a template across different source documents while reducing the Atlas design effort required to build it.

AX methods are provided for most tables in the AOT, or you can create your own and Atlas will execute them if they are entered against the correct field property in an upload template. As a general rule, methods prefixed with INIT (this means “initialize”) as part of the AOT name are useful. For example an X++ method called “initFromInventTable” can be added to the Item Number property...

---

**ATLAS 6.0 X++ Table Method Example.xlsx**

1) Open the file named above and click the **Upload** icon in the ribbon bar

2) Right click the in document template and open the upload **Inspector** pane

3) Click the **COG** to the left of the **Item number** field in the header

   Choose “initFromInventTable” from the **X++ Table method** drop down list

4) This x++ table method will automatically populate the 6 fields below with values from these tables. The template values update the other 4 fields.

---

Contents of the ForecastSales table after upload containing an X++ method
4.5 **Key Points**

In this chapter you learned that in addition to selecting upload fields for a template, field properties must be considered. Field property choices depend on the upload objective and the judgment of the Atlas designer.

In choosing field properties an Atlas designer must consider:

- The source data to be uploaded
- The design of the target table(s) and data source(s)
- The Atlas upload function to be used

All Fields in a template must be assigned one of six Field Types:

- Value
- Incremental
- Multi Column
- Parent field
- Child field
- Reference field

There are 7 additional field properties to be considered:

- Visible
- Number sequence
- Unique
- Mandatory
- Skip zero
- Disable
- X++ Table method

You also learned that:

- Templates provide a mechanism for an Atlas designer to pre-set field properties
  - This reduces the input burden on the end user prior to run time
- Default properties are typically sufficient to complete a simple template
- Templates are validated when they are run
  - Incorrect properties often contribute to initial upload errors
  - When validation occurs without errors the upload is complete
4.6 Quick Interaction

Take a moment to write down the three key points you have learned:

1. 

2. 

3. 

...
5 APPEND, UPDATE, FIND + REPLACE FUNCTIONS

5.1 Outline and Objectives

Append, Update, and Find + Replace functions are used to add new and change existing records in target tables in a data source. Append simply adds new records that don’t currently exist hence a filter is not available. Update changes existing values therefore filters can be chosen to limit an update to specific records. Find + Replace deletes existing records and appends new records as a replacement for the deleted ones.

As mentioned previously in this guide, when selecting the correct upload function for the objective, an Atlas designer must consider the source data to be uploaded and the design of the target table(s) and data source(s). The append function should never be used to upload to transaction tables, instead use the journal function explained in the next chapter. There are subtle but important differences between the Update and Find + Replace functions. The designer must apply suitable properties to the fields in each template when appropriate.

At the end of this chapter, you will

- Understand the three upload functions of:
  - Append
  - Update
  - Find + Replace
- Understand how each of these upload functions are used to build and run templates
- Understand which field properties are relevant for which function
- Understand how to use these upload functions with other Atlas functions
5.2 Append function

The Append function adds one or more records to a table in a target data source with values found in the source document. This is the simplest of the upload functions because no filters are needed as there are no existing records. Depending on the table structure of a target data source many append templates may be required in one document in order to complete an upload. See Chapter 8 Batch tasks in this upload guide for more discussion on multiple templates.

The Append function is typically used to add new lists of

- Customers
- Vendors
- Items
- Charts of accounts
- Employees
- Warehouses
- Fixed assets
- You name it...

...when hand keying of hundreds of records field by field through a user interface menu is time consuming, error prone, and tedious

Append templates should be used

During new system implementation to load extensive main table and setup data
To transfer records between data sources by including a template and a query in the same document

Append templates should not be used

To upload source data to transaction tables
In this case always use the Atlas Journal function
...covered in the next chapter
1) To create a new Append template from scratch and run the upload

a. Open the worksheet above which contains data to be uploaded

b. Click the Upload icon from the ribbon bar, then click Upload + in the task pane

   In the New Upload pane click the Templates button, then click the Append icon

c. In the Append pane enter the Upload Title “Upload New Zip Codes”

d. In the Data Sources pane choose the AX2012R3 data source

e. In the Table pane choose the Zip/postal code table

f. In the Fields pane un-tick all but the Zip/postal code and Country/region fields

g. Click the Create bar to insert the template in the document

h. In the upload Inspector

   Add the literal value USA to the Country/region field

   Add the named range =Zip Code to the Zip/postal code field value

   Assign the named range zip Code to cells E9 through E18 in the worksheet

   If desired change the source data in cells E9 through E18 in the worksheet

i. Run the Upload
5.3 **Update function**

The **Update** function is used to change one or more existing records in a target table with values found in the source document. Not all data in a source document need be uploaded. The key field(s) in the target table must have their property(s) set to **Unique** in the Atlas template. Some target tables might have more than one key field. It is up to the designer to become familiar with the target table and identify the key fields.

A common practice is to extract records from a table into a new document, change the records, then upload the changes from this new source.

The Update function is appropriate when:

- You want to adjust the values of many fields in many records OR
  - one field in many records
  - many fields in one record
- Hand keying and tabbing across numerous fields is exacerbating
- A mass change across numerous records is to be undertaken
- Records were missed during a previous upload
1) Add an **Update** template to this **Vendor Attributes** report

   a. Click the **Upload** icon from the ribbon bar, then click **Upload +** in the task pane

      In the **New Upload** pane click the **Templates** button, then click the **Update** icon

   b. In the **Update** pane enter the **Upload Title** “Update Vendor Attributes”

      In the **Data Sources** pane choose the **AX2012R3** data source

      In the **Table pane** choose the target table **Vendors**

   c. In the **Fields** pane add and remove fields until these remain **Vendor account**, **Currency**, **Account type**, **Group**, **Invoice account**, **Method of payment**, **Mode of delivery**

   d. Click **Next >** then **Create >** to insert the template **in-document**

      Right click each **Field** and select its default **named range**

      Click the **COG** to the left of **Vendor account** and tick the **Unique** property

   e. Map the **named ranges** to the document

   f. Change the Attribute values in the columns D through I of the source document

   h. Click **Next >** and **Run** the **Upload**
### 5.4 Find + Replace Function

In certain target tables such as in an AX data source, duplicate records are allowed. Therefore it is a business decision whether to retain duplicates and perhaps assign revisions to the records, or remove the redundant records when updates occur. **Find + Replace** deletes existing records specified by the designer in the template filter(s), and appends new records specified in the template fields.

A typical example is the maintenance of an annual item forecast. If the forecast is updated during the year, Find + Replace can be used to remove the old forecast in the target data source and replace it with the new forecast data in a source document.

This function is not appropriate where records cannot be deleted because of dependencies on other records, as is the case with customers, vendors and ledger accounts. Once again the Atlas designer must consider the source data to be uploaded and the design of the target table(s) and data source(s). In some cases the Update function is the more suitable alternative.

Use the Find and Replace function when:

- You want to remove a set of records and replace them with a new set
- Wholesale data changes are required and inter-dependent records do not exist in the target data source
- The task of entering records through an application interface exceeds the time taken by the Atlas upload system to do the same thing
- When numerous or lengthy forecast(s) are to be loaded into new forecast model(s)
Append, Update, Find + Replace Functions

ATLAS 6.0 Find + Replace Example.xlsx

1) To add a Find + Replace template to the Item Forecast report

   a. Click the Upload icon from the ribbon bar, then click Upload + in the task pane
      In the New Upload pane click the Templates button, then click the Find + Replace icon

   b. In the Update pane enter the Upload Title “Find + Replace Item Forecast”
      In the Data Sources pane choose the AX2012R3 data source
      In the Table pane choose the target table Demand Forecast (Forecast Sales)

   c. In the Fields pane add and remove fields until Model, Item number, Date, Sales quantity, and Item allocation key fields remain

   d. In the Filters pane tick Item number

   e. Click Create > to insert the template in-document
      In the Model field enter a value of CurrentFdemao
      Right click the Item number field and choose =ItemId
      Add the X++ Method “initFromInventTable” as an Item property
      Right click the Date field and choose =StartDate
      Right click the Sales quantity field and choose =SalesQty
      In the Item allocation key field enter a value of Allocate

   f. Click the Filters button
      Right click Item number and choose =ItemId

   g. Map the named ranges to the document
      Change the Sales quantity values in the source document

   h. Click Next > and Run the Upload

   i. Run Upload again and note the record count on the Results page
5.5 **Key points**

This chapter introduced the **Append, Update, and Find + Replace** functions. These functions are used to add new and change existing records in target tables in a data source. Use them when the volume of records to manipulate is large or the time and effort required to accomplish additions or changes through an application interface is unrealistic.

Among the lessons learned:

- **Append** adds new records that don’t currently exist
  - Use to upload data for main tables such as Vendors, Customer, Projects, etc...
  - Do not append to transaction tables, use journals

- **Update** changes one or more existing values
  - Typically one unique field must be specified in a template

- **Find + Replace** deletes existing records and appends new ones
  - Often used for maintaining item forecasts

**Update** and **Find + Replace** are similar in that filters can be chosen to limit both functions to specific data in the source document. They are different in that Update performs changes but does not delete.

The designer must apply suitable properties to the fields in each upload template when appropriate.

In order to select the correct upload function for the objective, an Atlas designer must consider...

- The source data to be uploaded
- The design of the target tables
- The target data sources
5.6 Quick interaction

Take a moment to write down the three key points you have learned:

1. 

2. 

3. 

6 THE JOURNAL FUNCTION

6.1 Outline and Objectives

Use the Journal function to upload transactions that you would normally enter using any of the AX journals such as vendor invoice, general, fixed asset, inventory, trade agreements, free-text invoices, purchase orders, sales orders and any other AX journal. Candidates for this function are those tables in the target data source that are defined as related header and line tables.

This function allows you to send a single header record at a time and attach one or more line records. To run multiple journal uploads, use the Batch function described in Chapter 8.

Where a number sequence is involved, such as an order number or journal number, you can instruct Atlas to return the value which AX generates to a cell in the source worksheet. A journal upload adds new records only, similarly to the append function.

Use the Journal function in the following instances:

- To load legacy transaction data to a target data source during system implementation such as
  - Ledger balances
  - Receivables balances
  - Payables balances
  - Project beginning balances
  - You name it...
- When AX budget journals are to be loaded into a new budget model
- When loading new journals through an application interface would take longer than using an Atlas journal

At the end of this chapter, you will understand

- How to build a journal template
- How to map the template fields to the document
- How to set the field properties in a journal template
6.2 Designing a Journal Template

Journal document layout

Begin by laying out a source worksheet journal which consists of one header and multiple lines such as the example below. Add a title, choose excel formatting, a color scheme, company logo, etc. Enter the journal information you wish to upload in all fields.

ATLAS 6.0 Journal Example.xlsx

Unhide column A and notice the Journal Batch and the Voucher number sequence codes. These values are being extracted from an AX data source using filters of Datatype and journal Name with Atlas single cell text formulas you learned in the reporting class. Change the values in Datatype or journal Name, and the number sequence codes will change accordingly. Atlas will read these single text formulas even though column A is hidden.

These number sequence codes will be mapped to the Atlas journal template.
Identify header and line tables and fields

1) To build a journal template

   a. Click the **Upload** icon from the ribbon bar, then click **Upload +** in the task pane
      In the **New Upload** pane click the **Templates** button, then click the **Journal** icon

   b. In the **Update** pane enter the **Upload Title** “Daily General Journal”
      In the **Data Sources** pane choose the **AX2012R3** data source
      In the **Header Table** pane choose the target **LedgerJournalTable**

   c. In the **Fields** pane add and remove fields until **Journal batch number, Name,** and **Description** fields remain

   d. Click **Next >** and in the **Lines Table** pane choose the target **LedgerJournalTrans**

   e. In the **Fields** pane add and remove fields until these remain:

      - **Journal batch number**
      - **Date**
      - **Voucher**
      - **Description**
      - **Currency**
      - **Debit**
      - **Credit**
      - **Main Account (LedgerDimensionMainAccount)**
      - **Line number**
      - **Account Type**
      - **Document**
      - **Document Date**

   F. Click **Create** to insert the incomplete template into the document
Map fields to source document

ATLAS 6.0 Journal Example.xlsx

1) From the upload Inspector

   a. Right click each field in the journal header in the task pane and choose its system name prefixed with “=”

   b. Right click each field in the journal lines in the task pane and choose its system name prefixed with “=”

   c. Map the system names for all fields in the template (except line number) to the cells and columns in the document

      To do this highlight the worksheet cells and enter each system name in the excel Name Box
Set field properties

ATLAS 6.0 Journal Example.xlsx

1) From the upload Inspector

   a. In the Journal header set the Journal batch number property to Number Sequence

   b. In the Journal lines enter these field properties...
      Set Journal batch number to Parent field
      Select “Journal batch number” from the Parent field drop down list
      Set Line number to Incremental
      Enter “1” as the Start value

   c. Set the overall template Upload Properties to
      Return field Journal batch number
      Insert Cell $I$5

2) Run the Upload

3) In the Results pane notice three records were Inserted

   One journal header
   Two journal lines
6.3 Key points

This chapter introduced the Atlas Journal upload function.

You learned that:

- The Atlas Journal function uploads transactions that you would normally enter using any of the AX journals
- A journal is made up of a header table and a lines table
- You can instruct Atlas to return the next journal number which AX generates to a cell in the source worksheet
- Templates are mapped to and inserted in the source document making it re-useable for repeated uploads

Use this function to add transactions to a target data source when you wish to:

- Load opening balances at time of new system start-up
- Load transactions that need adjustment while in the worksheet, prior to upload
- Use a worksheet as an interface from an external system where an automatic interface is not possible
- Provide employees with a means to prepare data for entry using a familiar Office interface, such as:
  - Project Timesheets
  - Travel expenses
  - Customer forecasts
- Load AX budget journals into a new budget model

... Or whenever loading new journals through a user interface would take longer than using an Atlas journal
6.4 Quick interaction

Take a moment to write down the three key points you have learned:

1. 

2. 

3. 

7 MATRIX STYLE UPLOAD

7.1 Outline and Objectives

Use a matrix style upload whenever a data source presents information through its application user interface in rows and you wish to extract and transpose it into columns for analysis in a document. After adjusting it, you then wish to upload the revised column data to the same or a different target data source where it is again stored in rows. To accomplish this, use a matrix style upload which combines the Matrix query function you learned in the reporting class, with the Multi Columns field property you learned in Chapter 4 of this guide.

The completed document will contain both a query and a template. Existing data is extracted to the document and presented in period columns which represent, for example, a day or a month. These reporting period columns are mapped back to a template and changes are uploaded to the data source. A few examples of matrix style uploads are financial budgets, item forecasts and project timesheets. You can use this style of upload with the Atlas Append, Update, Find + Replace, and Journal functions.

When building the template, if you wish to manually enter the dates for each column you must assign the field property Multi Columns to both the amount and the date fields. Or, only if each period is the same length, you can configure the template to auto-generate the dates by assigning the field property Multi Columns to only the amount field. Atlas will auto-generate the remaining period dates for each column in the source document based on the first date which you enter in the Date value in the template.

At the end of this chapter, you will know

- When to use a matrix style upload
- How to build a matrix style upload
- How to use the auto-generated date feature
7.2 Prepare the Source Document

This document will provide accountants with a means to revise budget data for upload into an AX data source using an Excel worksheet as the source. Begin with this partially completed budget journal containing header information in the upper left and line period information in cells D13 through P13. The information in the light green cells has been entered manually by a virtual accountant.

This example also contains other Atlas functions you learned in the reporting class. Click on cell C11 and notice the Atlas lookup formula presents a list of budget codes for selection in the task pane. Click on cells B12 and B13, and read the Atlas text formulas for each cell and notice they are extracting budget transaction types and RecIds for the budget code selected. Choose different budget codes from the lookup list to see these cell values change, then reset the code to Original budget.

Data in this preliminary document will be used in filters for a matrix query as well as field values for a journal upload template.
7.3 Insert a Query Snippet

Now insert a matrix query into the budget lines area at the bottom of the document to extract existing budgets for review, and enter revised budgets for upload.

ATLAS 6.0 Matrix Style Upload Example.xlsx

1) Create a current budget report using a matrix template snippet

   a. Click the Snippets icon from the ribbon bar, then click the Snippets button in the New Object task pane

   b. Select John’s Workspace and locate the snippet “Matrix Report – GL Budget”

   c. Drag and drop this snippet into the first column of the worksheet

   d. Click within the body of the new matrix report and...

      ...Click between the Data Inspector and the Style Inspector in the ribbon bar

      ...Note how the fields and filters correspond to the worksheet cells

      ...Note their assigned values

   e. Analyze the budget amounts and...

      Revise budgets in each period as needed
7.4  Insert a Template Snippet

ATLAS 6.0 Matrix Style Upload Example.xlsx

1) To prepare the revised document for upload using a journal template snippet

   a. Click the **Upload** icon from the ribbon bar, then click **Upload +** in the task pane

   b. In the **New Upload** pane click the **Snippets** button

   c. Locate and double click the snippet named “**Journal Upload – GL Budget**” to insert a copy into the document

   d. Scroll up and down the upload **Inspector** list to review fields selected for uploading to the **Budget Header Table** and **Budget Lines Table**

      Review the field properties supplied for the **Entry Number**, **Date**, **Line Number**, **Reference**, and **Transaction Currency Amount** fields

   e. Map all field named range values beginning with “=” in the template to the corresponding cells in the worksheet

   f. **Run** the **Upload**
7.5 Results

After uploading, within the Data Inspector click Refresh the Query to confirm your new budget now resides in the target data source. If you made a mistake on the first upload, click the back button in the Results pane, correct your error in the source document and re-run the upload.

In this example since each period is the same length you can configure the template to auto-generate the dates during upload.

Change the field property for Date from Multi Columns to Value

Leave the Upload value set to the first period date

Run the Upload

Atlas will auto generate the remaining period dates for each column in the source document based on the first period value in the template. This technique saves time in avoiding the entry of Date values for all periods in the template.
7.6 **Key points**

This chapter introduced the Matrix style upload feature, where you can upload records that are sourced from worksheets containing period data which is arranged in columns. The upload source can be built to contain both a query that extracts and transposes data from rows in a data source to columns in the document, and a template that does the opposite.

A few suggestions for use are

- Financial budgets
- Item forecasts
- Project timesheets

You learned that:

A matrix style upload template can include any of these Atlas functions

- Append
- Update
- Find + Replace
- Journal

You learned the steps are:

- Build a matrix query to extract existing data
- Map these columns back to a template
  - Manually enter periods or have Atlas calculate them
  - **TIP:** Consider using the Skip zero property to omit uploading fields containing...
    - Blank
    - " _ _ 
    - "0"

You know that upon completion and upload

- The re-usable document will contain both a query and a template
- Changes in the source are uploaded to the data source
- A record is created in the data source for each row
7.7 Quick interaction

Take a moment to write down the three key points you have learned:

1. 

2. 

3. 

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8 THE BATCH FUNCTION

8.1 Outline and Objectives

The Atlas Batch upload function is important when a data source requires that many tables be populated in the correct sequence in order to view the new records in the application interface. It allows you to run one or more upload templates in a defined sequence dictated by the table structure of the target data source. Once again when constructing upload templates and the batch template itself, the Atlas designer must consider the source data to be uploaded, the design of the target table(s) and data source(s), and the appropriate Atlas function(s).

A batch template can include a mix of single cell queries and the other 4 upload templates. For example when a subsequent template is dependent on a filter value from a previous template in a batch sequence, a single cell query can provide it. A batch template can include special events that can be triggered while the batch is running, for example workbook refresh or messages to provide user information. Batch templates are inserted in-document in the same fashion as the other 4 templates.

If an objective is to upload large numbers of order journals (for example in AX - sales, purchase, production, or any type of order), batch templates are the ideal mechanism. For example sales order journals will have one or many lines, and a new order number is required for each customer in the source document. When a "split by customer" step is added in a batch, Atlas will trigger the generation of a new order number each time a new customer is encountered. Without the batch split feature order journals would be run individually. Another example is to split a large list of general journals by company...one source document can upload across separate companies in one run, and company specific journal numbers can be generated.

At the end of this chapter, you will understand

- How to create and insert a batch template in-document
- How to sequence templates
- How the special event triggers
- How to set up and use the Split feature

Use the Batch function when you wish to:

- Upload multiple templates into multiple tables to complete a functional task and where sequence of upload is dictated by the target data source
- Use a single template to upload and generate large numbers of order numbers based on a "split by column" setting such as customer
- Use a single template to upload and generate large numbers of journal numbers based on a "split by column" setting such as company
- All template fields are candidates for "split by column"
8.2 Prepare the Source Document

This document will provide accountants with a means to create new fixed assets and sequentially update value model records in an AX data source using an Excel worksheet as the source. Test information in all cells has already been entered manually by a virtual accountant. After this worksheet has been tested, it will be stored in the finance department's fixed asset maintenance folder as a data entry document for future uploads. Minimum required data for this document is highlighted in orange.

The Atlas designer has studied the table structure in the target data source and concluded that two upload templates are required to complete the upload. Data in this source worksheet has been mapped to an Append template and an Update template. Locate these templates using the upload Inspector, then review the selected fields, mapped values, and field properties.

The Atlas designer has determined that the target data source requires that upload must occur in this sequence:

1) Append the new Fixed Assets to the AssetTable

2) Update the new Fixed Asset details to the value model table AssetBook
8.3 Creating a Batch

Creating a batch template

ATLAS 6.0 Fixed Asset Batch Upload Example.xlsx

1) To build a batch template

   a. Click the **Upload** icon from the ribbon bar, then click **Upload +** in the task pane

      In the **New Upload** pane click the **Templates** button, then click the **Batch** icon

   b. In the **New Batch** pane enter the **Batch Title** “Upload Fixed Assets”

   c. Click **Add batch step** to display the pop up pane

   d. Click the **Select Upload Template** button

   e. **Highlight** each template then click **Add Step+** to add them to the **New Batch** pane

   f. **Drag and Drop** either of the templates if they are not arranged in the sequence above

   g. Click **Create** to add the batch template to the document

   h. The **Run Batch** pane is presented
8.4 Running a Batch

Running the batch template

The batch steps appear in sequence without highlighting. Click the green Run Batch tab and observe the processing of each successive step. The steps will change to green when the batch is completed.

Managing a batch run

If a batch run doesn’t complete, the problem step will be highlighted in red and error / warning information will be displayed. Click the three dots to the right of the error count to expose the Details pane then click the Warning(s) tab to view messages. To resolve errors, modification of the source document, queries, and/or templates in the batch may be required together with these run time maintenance commands:
Resume
Click this command to continue processing from the erroneous step.

Reset
Clears the error status of all steps, which changes the state of all steps to ready. The batch can then be run again from the first step in the sequence.

Skip
Click to skip an erroneous step if you are sure the subsequent steps are not dependent on the step to be skipped.

Special Events within a batch template

During the processing of a batch template special events can be triggered. Use these optional commands as desired, suggestions are below. Navigate to the Batch Inspector and click Add batch step. Click one of the three buttons at the top of the pane:

Message to display
Enter a Message to display, click Add Step+ then sequence it within the batch template
When this step in the sequence is reached the message will appear in the Run Batch pane
Message can be displayed to the operator of the batch when a step has been reached

Refreshes the document
Click Add Step+ then sequence it in the batch template
When this step in the sequence is reached the document will be refreshed
(ie in-document single cell queries will be triggered to run)

Control name
Enter a named range in a cell in the worksheet
Enter the same named range prefixed with “=” in the Control Name field
Enter a message in the “Text to Insert” field
Click Add Step+ then sequence it in the batch template
The message will be displayed in the named cell in the document when the step has completed
Example: A user can monitor batch progress from within the worksheet
8.5 The Batch Split feature

As an example of the batch split feature we will upload multiple sales order journals using one template, and three orders will be created among three customers. The first order has two lines, the second and third have one line each, study the highlighted rows below. The Atlas designer has prepared this worksheet to be used as the source document...

Prepare the Source Document

The Atlas designer has also studied the table structure in the AX target data source, then built and embedded a sales order journal template named “Upload Sales Orders” in-document. Locate this template using the upload Inspector, then review the selected fields, mapped values, and field properties for both the Header and Lines tables.
Create a Batch Template with a Split

Select the upload template, identify the "Split by column" field, and add the upload template as a step in the batch template.

1) To build the batch template
   a. Click the Upload icon from the ribbon bar, then click Upload + in the task pane
      In the New Upload pane click the Templates button, then click the Batch icon
   b. In the New Batch pane enter the Batch Title “Multi Sales Order Upload”
   c. Click Add batch step to display the pop up pane
   d. Click the Select Upload Template button
   e. Highlight the Upload Sales Orders template
   f. Tick Split by column and highlight the Customer account field
   g. Click Add Step+
   h. Click Create to add the batch template to the document
   i. Run the batch
The Batch Function

Results of the “Batch Split”

ATLAS 6.0 Multi Sales Order Batch Split Example.xlsx

While the batch is processing rows the same order number is generated for subsequent rows until a different customer is encountered, at which time a new sales order number is generated and the process continues. Hence the batch is “split by customer”.

When the batch is complete it is evident in the Run Batch task pane that orders were created for the three customers listed...US-001, US-002, and US-003. Click the drop down arrow to the right of each customer to view the number of header and line records Inserted, and the sales order number generated for that customer.

Examine the target data source and locate the new orders.
The Batch Function

8.6 Key points

This chapter introduced the Batch function, where you can combine upload templates and organize them in a run sequence in order to view the new records in the application interface. Without the batch function multiple upload templates in a document must be run individually. When constructing a batch template the Atlas designer must consider the source data to be uploaded, the design of the target table(s) and data source(s), and the appropriate Atlas function(s).

You learned that a batch template

- Will contain any of the other 4 upload templates – Append, Update, Find + Replace, Journal
- Is inserted in-document as any other template
- Uploads multiple templates in sequence into multiple tables
  - A source document can include a mix of queries and templates
  - Include an in-document query when a template is dependent on a value generated from a previous template in the sequence
  - The query returns the value to the source document
  - The next template in sequence uses this value as a filter

There are maintenance options which help manage a batch:

- Resume to continue processing from the erroneous step
- Reset the error status of all steps. Then run again from the first step.
- Skip an erroneous step if you are sure the subsequent steps are not dependent on it

A batch template can include special events that can be triggered while the batch is running

- Messages to Display - message can be displayed within the Atlas Run Batch pane
- Refreshes the document – in-document single cell queries are be triggered to run
- Control Name - message will be displayed in the named cell in the document

A batch template contains a single template when many records must be “split”

- A “split by column” step is added in the batch template
- A “sub-template” is generated each time the column value is encountered at run time
- Splits can be performed on any column in the source workbook
8.7 Quick interaction

Take a moment to write down the three key points you have learned:

1. 

2. 

3. 