



Banner Document Management User Guide

With ApplicationXtender 16.3

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System Overview

Welcome to Banner® Document Management (BDM), an imaging and electronic document management system that meets the specific needs of higher education institutions. BDM integrates Banner with two OpenText document management products: ApplicationXtender Document Manager and ApplicationXtender Web Access.

BDM integrates with Banner at the data, event, and form levels. In addition, each Banner product (Human Resources, Finance, Financial Aid, Student, and Advancement) has specific integration points that improve efficiency and supplement the decision-making process through easy access to relevant document collections.

BDM can also be used standalone, outside the Banner environment, to scan documents that do not pertain to Banner data.



Note: For specifics about using BDM in a Multi-Entity Processing (MEP) environment, refer to the *Banner Document Management Multi-Entity Processing Implementation Guide*.

Functional overview

BDM allows you to manage documents as follows:



- Scan and index documents individually or in a batch.
- Query for specific images or documents from a Banner form.
- Limit the scope of the query based on document type and, where desirable, the cursor location on a Banner form.
- E-mail images and documents to other users for review.
- Annotate images.
- Update Banner data based on the receipt of appropriate documents.
- Scan and store documents that do not pertain to Banner data.
- Use the Multi-Entity Processing (MEP) feature if Banner data is segregated by campus or institution.

BDM uses Banner security to ensure that users access the appropriate information. This security is enforced whether BDM is accessed from Banner, or in a standalone manner.

Integration between Internet-Native Banner (INB) and ApplicationXtender Web Access allows you to access ApplicationXtender documents and images through a Web browser.

Supporting features in the Banner user interface

The INB toolbar includes the following BDM buttons:

- BDM - Display Document  - This button opens ApplicationXtender Document Manager or ApplicationXtender Web Access to run a query from Banner.
- BDM - Add Document  - This button opens ApplicationXtender Document Manager or ApplicationXtender Web Access to create a new ApplicationXtender document from data stored in Banner.

The INB Tools menu includes the following BDM options:

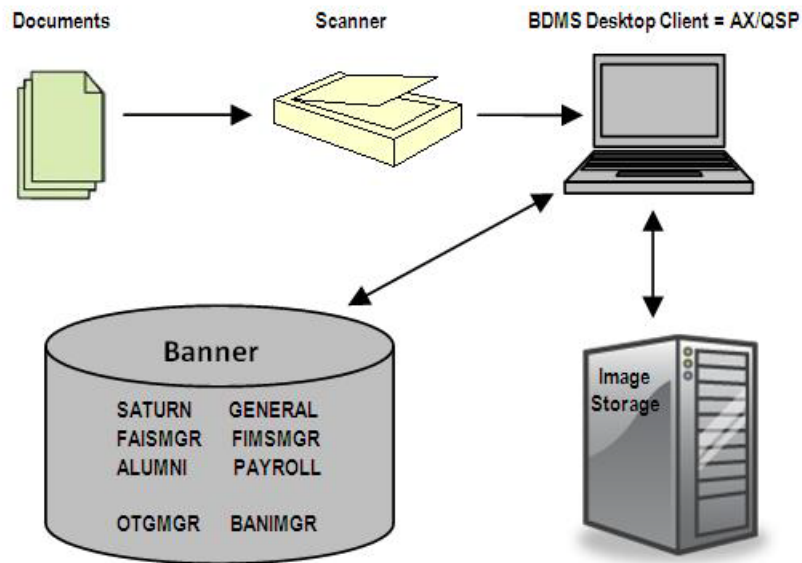
- Retrieve Documents - This option opens ApplicationXtender Document Manager or ApplicationXtender Web Access to run a query from Banner.
- Count Matched Documents - This option runs a query to determine whether supporting documents exist for the current Banner record.
- Add New Document/Page - This option opens ApplicationXtender Document Manager or ApplicationXtender Web Access to create a new ApplicationXtender document from data that is stored in Banner.
- User Preferences - This option allows you to define user-specific settings for default BDM behavior.

For specifics about using these features in a Multi-Entity Processing (MEP) environment, refer to the *Banner Document Management Multi-Entity Processing Implementation Guide*.

Configuration diagrams

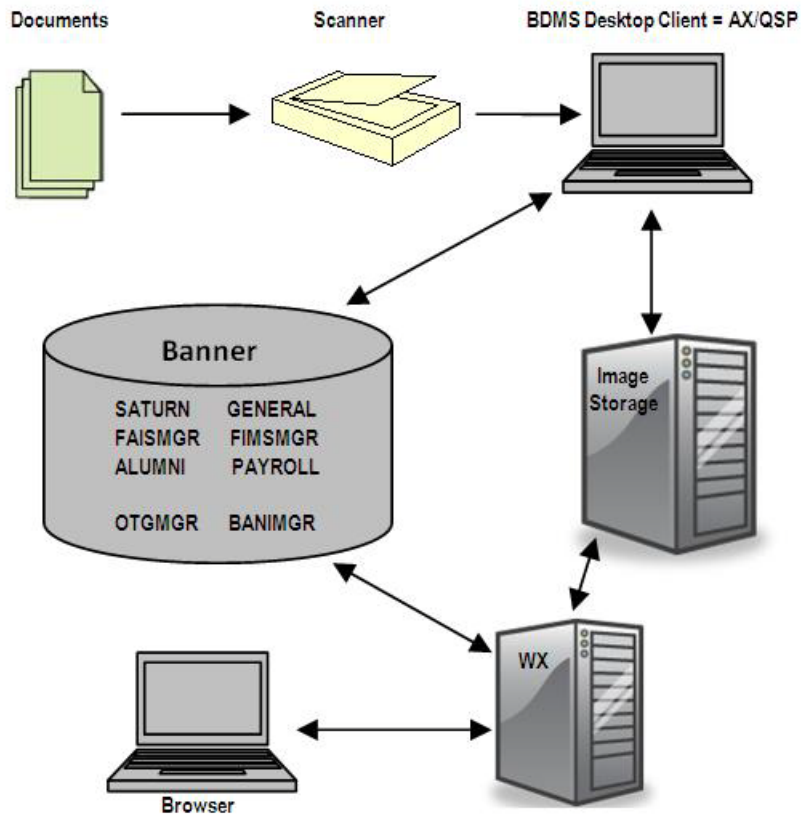
The following diagrams show common BDM configurations.

Banner with ApplicationXtender Document Manager



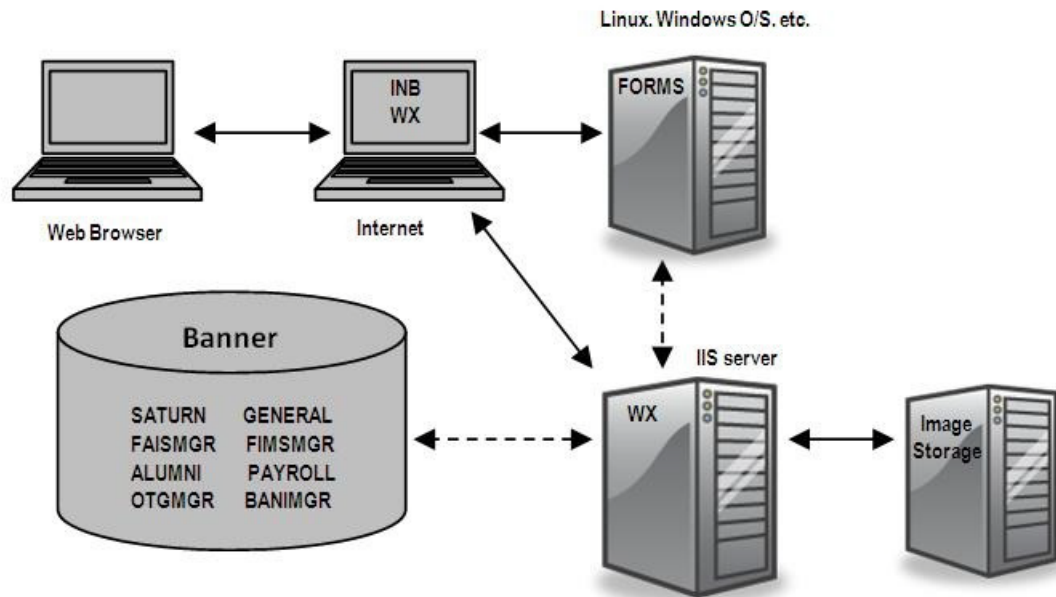
Note: QuickScan Pro provides batch scanning functionality, allowing you to scan documents and then index them at a later time in ApplicationXtender Document Manager.

Banner with ApplicationXtender Document Manager and ApplicationXtender Web Access



Note: QuickScan Pro provides batch scanning functionality, allowing you to scan documents and then index them at a later in ApplicationXtender Document Manager.

BDM Web architecture



BDM components

BDM includes the following components:

- *ApplicationXtender (AX)* – OpenText suite of content management products that facilitate file/object storage, OCR, and other features for document management.
- *ApplicationXtender Document Manager* – A client/server component of OpenText ApplicationXtender product that allows users to access ApplicationXtender content management functionality via desktop software, scan and index documents, and index batches of documents.
- *ApplicationXtender Web Access (WX)* – An Internet-native component of OpenText ApplicationXtender product that allows users to access ApplicationXtender content management functionality via a Web browser.
- *QuickScan Pro* – A user-based client/server application that is used for batch scanning.
- *ApplicationXtender Web Services* – An Internet-native component of OpenText ApplicationXtender product that uses APIs to integrate with ApplicationXtender. Web Services is a flexible alternative to ApplicationXtender CDK methods.
- *ApplicationXtender for Microsoft Office (AXO)* – An ApplicationXtender product that allows users to create, update, and delete documents in BDM applications in ApplicationXtender from within a Microsoft Office product, such as Word, Excel, PowerPoint and Outlook.

Accessing ApplicationXtender

This chapter gives instructions for three different ways to access ApplicationXtender:

- Log in to ApplicationXtender Document Manager (standalone).
- Log in to ApplicationXtender Web Access (standalone).
- Access ApplicationXtender from Banner®.

Banner Document Management also supports Central Authentication Service (CAS) Single Sign-on, and Ellucian Identity Service (EIS). Instructions for any of these authentication protocols are in the product-specific guides published for them.

Log in to ApplicationXtender Document Manager standalone

If you are outside the Banner environment, use the following steps to log in to ApplicationXtender Document Manager.

1. Launch Programs > ApplicationXtender Desktop > AppXtender Document Manager. The login dialog box is displayed.
2. Select a data source.
3. Enter your user name in the **User Name** field.
4. Enter your password in the **Password** field.
5. Click **Login**.

After you log in, a list of Applications is displayed under the data source. Use the following steps to log in to a different data source.



Note: If you do not see a list, select **View >Applications** for the list of applications to display when you log in to ApplicationXtender Document Manager.

1. In the Application List window, right-click the name of your current data source and select **Logout**.
2. In the Application List window, right-click the name of the data source that you want to use and select **Login**.
3. Enter your user name in the **User Name** field.
4. Enter your password in the **Password** field.
5. Click **Login**.

Log in to ApplicationXtender Web Access standalone

If you are outside the Banner environment, use the following steps to log in to ApplicationXtender Web Access.

1. Launch a supported Web browser.
2. Enter the URL for your ApplicationXtender Web Access application.
The Login window is displayed.
3. Select a data source from the **Data Source** drop-down list.
4. Enter your user name in the **User Name** field.
5. Enter your password in the **Password** field.
6. Click **Login**.

Access ApplicationXtender from Banner

If you are inside the Internet-Native Banner (INB) environment, you can use the Tools menu and the INB toolbar buttons to access ApplicationXtender. Settings on the User Preference Form (EXAUPRF) control the default behavior for the Tools menu and the toolbar buttons.



Note: For details about accessing ApplicationXtender from Banner in a Multi-Entity Processing (MEP) environment, refer to the *Banner Document Management Multi-Entity Processing Implementation Guide*.

User Preference Form (EXAUPRF)

Settings on EXAUPRF control the default behavior when the Tools menu or the toolbar buttons are used to access ApplicationXtender from Banner.



Note: If your system administrator sets the **Use System Default Setting** flag to configure universal settings for all users, you may not be able to access EXAUPRF.

Use the following steps to specify your preferences for accessing ApplicationXtender from Banner.

1. Launch Internet-Native Banner (INB).
2. Access the User Preference Form (EXAUPRF).

3. In the **Default Association Between Banner and AppXtender** section, use the check boxes to specify which ApplicationXtender product your Banner session invokes through the Tools menu or the toolbar buttons.



Note: Set up the Integration URLs on EXAINST to point to ApplicationXtender Web Access and the INB-AX Bridge (for ApplicationXtender Document Manager). These URLs are used when a user invokes ApplicationXtender from one of the two toolbar buttons or options under **Tools > Banner Document Management**.

4. In the **Default Source for New Document/Page** section, set the default interface that is displayed when document creation is initiated in Banner.
 - If you specified AppXtender Document Manager in step 3, this interface might be a file browse window or a local scanner interface. The specified interface will be displayed when the **BDM - Add Document** option is initiated from a Banner form.
 - If you specified ApplicationXtender Web Access in step 3, the only available option is `Import File`. The specified interface will be displayed when the **BDM - Add Document** option is initiated from a Banner form.
5. Save the record.
6. Exit EXAUPRF.
7. Exit INB.

Tools menu

The Banner Tools menu provides the following options for accessing ApplicationXtender:



- Retrieve Documents - This option opens ApplicationXtender Document Manager or ApplicationXtender Web Access, depending on your user preference setting, to run a query from Banner.
- Count Matched Documents - This option runs a query to determine whether supporting documents exist for the current Banner record. The query result is a pop-up window that displays the number of documents found in the BDM application as defined for the Banner form in the BDM context rules. Refer to [“Context rules” on page 23](#) for more details.
- Add New Document/Page - This option opens ApplicationXtender Document Manager or ApplicationXtender Web Access, depending on your user preference setting, to create a new ApplicationXtender document from data stored in Banner. Refer to [“Attach pages to an existing document” on page 21](#) for more details.
- User Preferences - This option allows you to define user-specific settings for default BDM behavior.



Note: If your system administrator sets the **Use System Default Setting** flag to configure universal settings for all users, you may not be able to access EXAUPRF.

Toolbar buttons

The following Banner toolbar buttons can be used to access ApplicationXtender:

- BDM - Display Document  - This button opens ApplicationXtender Document Manager or ApplicationXtender Web Access, depending on your user preference setting, to run a query from Banner. This corresponds to the Retrieve Documents option on the Tools menu.
- BDM - Add Document  - This button opens ApplicationXtender Document Manager or ApplicationXtender Web Access, depending on your user preference setting, to create a new ApplicationXtender document from data stored in Banner. Refer to [“Attach pages to an existing document” on page 21](#) for more details.

System messages

Depending on the Windows operating system on your workstation or ApplicationXtender server, you might get one, or both, of the following messages when connecting from Banner to ApplicationXtender:

- You might get a Windows popup message asking for permission to open a program on your computer. Select the **Always ask before opening this type of address** check box. Then click **Allow**.
- You might get an Internet Explorer security message indicating that the Web site wants to open Web content using this program on your computer. Select the **Do not show me the warning for this program again** check box. Then click **Allow**.

Creating and Indexing Documents

You can use Banner® Document Management (BDM) to store various types of information as documents in ApplicationXtender. These documents are organized in applications for easy retrieval. Each document is saved with an index that is used to search for the document from an Internet-Native Banner (INB) form or to access directly using ApplicationXtender Document Manager or ApplicationXtender Web Access.


Various input methods are available to add documents and pages. You can add documents by using a scanner, creating a document from Banner, or importing a file or object. You can add pages and page versions to documents after they are created.

This chapter provides information about creating documents, removing documents, indexing documents, and attaching pages to existing documents.

Scan documents

You can create new documents from any scanner that is supported by or certified for ApplicationXtender Document Manager or ApplicationXtender Web Access. For detailed scanning instructions and a list of certified and supported scanners, refer to the OpenText documentation for ApplicationXtender Document Manager and ApplicationXtender Web Access.

Create new documents from Banner

To create a document or add a page to an existing document, select the  button from the toolbar of the applicable Banner form. The following processing occurs:

1. Either ApplicationXtender Document Manager or ApplicationXtender Web Access launches, depending on the option selected for **Default Association Between Banner and AppXtender** on the User Preference Form (EXAUPRF). For more information, see [“User Preference Form \(EXAUPRF\)” on page 10](#).
2. In a MEP environment, the value of the institution code for the current INB session is stored in the `PROCESS_CONTEXT` field. The login process between INB and ApplicationXtender uses this field to identify the data source when Banner toolbar buttons or Tools menu options are used.

For detailed information regarding BDM in a MEP environment, refer to the *Banner Document Management Multi-Entity Processing Implementation Guide*.

3. The native behavior for creating a new document within the loaded application occurs. In ApplicationXtender Web Access, the Import File dialog box is displayed. In ApplicationXtender Document Manager, depending on your user preferences, either

the scanner interface is displayed if the **Scan** option is selected or an *Import File* window is displayed if the **Import File** option is selected. This activity requires the same user input as if the process was initiated directly within the OpenText product.

4. The new file or image is created with the index grid displayed next to the image of the new document. Depending on the criteria specified within the context rule for the Banner form, you might have all of the index field values populated, or you might need to enter some information (for example, document type) before saving the new index.



Note: The BDM Context Determination Form (EXABCXT) contains the context and parameter rules for most baseline Banner forms. The rules that are passed to ApplicationXtender Document Manager or ApplicationXtender Web Access depend on where the cursor is located when the toolbar button is selected. Refer to [“Using Context Rules and Queries” on page 23](#) for more details.

Creating a document from Banner allows a user to quickly associate a small volume of document information with a specific Banner record. This functionality is not a substitute for batch processing through QuickScan Pro or scanning and indexing queues.

Import documents

You can create a new document by importing an existing file. You can import any file type. If ApplicationXtender Document Manager or ApplicationXtender Web Access supports the file type that you import, the contents of the file appear in the Document Display view. If the file type is not supported, you need a third-party viewer to display the contents of the file.

For more information on supported file formats, consult the online help for ApplicationXtender Document Manager or ApplicationXtender Web Access.

Import and Index documents with ApplicationXtender Web Access

Complete the following steps to import and index documents:



Note: Follow the instructions pertinent to the ApplicationXtender Web Access privileges you have.

To create a new document using the New Document feature:

1. From **Application List** view, select the application you want to add the documents to.
2. Click the file cabinet drawer icon in the toolbar and select **UPLOAD NEW DOCUMENT**.

3. In the **Upload New Document** dialog box, click **Choose Files**, then select one or more files you want to import.
4. With the file path in the **File** text box, click **UPLOAD**.

The first page of the imported file appears in the Document Viewer.

5. Enter the index information for the new document and click **SAVE**.



Note: In the majority of the BDM baseline applications, when you enter the first index field and press the Tab key, the key reference data will be filled in.

6. To import and index additional documents, select **Application Name link** on the breadcrumb, then repeat [Step 1](#) through [Step 5](#) for each document.
7. Click **Logout** on the right side of the title bar to exit ApplicationXtender Web Access.

Import and Index documents for ApplicationXtender Document Manager

For ApplicationXtender Document Manager, use the following instructions to import and index a batch of documents:

1. Right-click the application name in the **Application List** view.
2. On the application shortcut menu, select **New Document > Import File**. The Import File dialog box appears, allowing selection of any file.
3. Navigate to and select the file that you want to import and click **Open**.

The first page of the imported file appears in the viewer in Document Display view.

4. Enter the index information for the new document and click **Save**.



Note: In most BDM baseline applications, when you enter the first index field and press the Tab key, the key reference data will be filled in.

5. To import and index additional document, select **File > Close**, then repeat [Step 1](#) through [Step 6](#) for each document.
6. Click **File > Exit** to close ApplicationXtender Document Manager.



Note: Refer to the Help in the ApplicationXtender Document Manager for additional information on importing, scanning, and indexing documents, and detailed information on the toolbar buttons available in ApplicationXtender Document Manager.

Indexing documents in a batch in ApplicationXtender

ApplicationXtender Document Manager

For ApplicationXtender Document Manager, complete the following instructions to open the batch list and index a batch of documents:

1. From the **Utilities** menu, select **Batch Index (List)**.

The Batch Index dialog box appears.

2. From the **Batches for application** drop-down list, select an application.
3. From the list of batches, select the batch you want to index.
4. Click **Index**.

The Batch Index toolbar appears with the first page of the batch in Document Display view.

5. Click **New Document**.



Note: Use the Previous Page and Next Page buttons on the Batch Index toolbar to navigate to the page where you can create a new document from the current batch.

6. Index the new document and click **Save**.



Note: All ApplicationXtender indexing features, such as ApplicationXtender Auto Index Import ([F7]), Key Reference ([TAB]), and appending pages ([F4]), are available when you index documents in batches. For details on ApplicationXtender indexing options, refer to the Help in the ApplicationXtender Document Manager.

7. To index the next page in the batch, click **New** on the toolbar.
 - When you click **New**, the data clears from the index fields and the **Save** button is enabled the Index panel.
 - Click **Attach Page** or **Attach All** to add pages to the most recently indexed document.
8. Repeat steps [Step 6](#) through [Step 7](#) for each batch document you want to index.

9. When all pages in the batch are indexed or added to ApplicationXtender documents, a message asks whether you want to index another batch. Click one of the following choices:

- Click **Yes** to index another batch. The Batch Index (List) dialog box appears.
- Click **No** if you do not want to index another batch. The current batch closes.



Note: Refer the Help in ApplicationXtender Web Access for additional information regarding batches.

ApplicationXtender Web Access

For ApplicationXtender Web Access, complete the following instructions to open the batch list and index a batch of documents:

1. In the Application List view, use one of these methods to select a batch to index:
 - Click the application that contains the batch of documents you want to index, and click the file cabinet drawer icon in the toolbar, and select **MANAGE BATCHES**. If batches exist for the selected application, information about those patches appear in the list.
2. Choose and open the batch you want to index.
3. On the page displayed in the viewer, in Index view, add the data to the index fields.



Note: In addition to the key fields, populate all non-required fields for which data is available so that the document index will be as complete as possible.

4. When you finish entering data, click **SAVE**.

ApplicationXtender Web Access creates the new ApplicationXtender document and stores the physical document electronic file or image file and its index information in ApplicationXtender.

The next page in the batch appears in the viewer.

5. To index the next page in the batch, click **Create Another Document**.

After you click **Create Another Document**, the data clears from the index fields and the **SAVE** button is enabled the Index panel.

6. Repeat steps [Step 4](#) through [Step 5](#), until all pages are indexed.

When there are no pages left in the batch, the All Document Pages Have Been Indexed dialog box appears.

7. To continue batch indexing, select **Index Another Batch Document**. If you have finished batch indexing, select your choice from the remaining options.



Note: Refer to the Help in ApplicationXtender Document Manager for additional information regarding batches.

Remove documents

For ApplicationXtender Document Manager, there are two ways to delete a document:

- The **Result Set** tab allows you to delete without displaying the document.
- The **Document Display** view requires the document to display before deletion.

For ApplicationXtender Web Access, use the following steps to delete a document:

1. Query the application that contains the document that you wish to delete.
2. The query may result in either a Query Results list of documents or display a document (if only one is found for the query). Follow the set of steps related to the result of the query:

- Query Results list

2.1. Select the document you want to delete.

2.2. Click the **DELETE** icon on the toolbar.

A message asks you to confirm the deletion.

2.3. Click **DELETE**.

A message confirms that the document has been deleted.

2.4. Click **OK**.

- Document displayed in Document Viewer.

2.1. Select **Document > Delete Document**.

2.2. Click **DELETE**.

2.3. Click **OK**.

A message confirms that the document has been deleted.

When a document is deleted, the index information for the document and the document pages are deleted.

For more information on deleting a document, consult the online help for ApplicationXtender Document Manager or ApplicationXtender Web Access.

Index documents

The index of a document allows for quick, easy retrieval of the document. The more detailed and specific the index, the easier it is to retrieve the document in a large system. An index should contain all or many criteria that a person might use to search for the document.

Several indexing aids are available to help you enter index information. The most commonly used aid is the key reference system, available on most applications that are delivered with BDM. Another indexing aid is the auto index system. The key reference

system and the auto index system complement each other and can be used together to quickly index documents to a fine level of detail.

The data in each of these tables is updated on a real-time basis; when a new record is added to a Banner table, the key reference or auto index table is updated. This keeps the data as current as possible, so that they are available to the BDM user who may add a record in Banner, then index a document to it in BDM.

All BDM applications use the `VPDI_CODE` index field to support the Database Extension Utility and Multi-Entity Processing (MEP). This text field is used in a MEP environment to identify the campus or institution code to which a document index is assigned. This field corresponds to the `VPDI_CODE` field in a Banner table record in a MEP environment.

Key reference system

You can perform a lookup in the key reference system by entering the key value or by performing a search.

Lookups using a key value

Enter the value of the first index field (typically ID in BDM-delivered applications) and press Tab to move to the next field or select another field. If the entered value exists in the key reference system, then associated (data reference) fields are populated automatically.

Example

The B-G-ID application includes the following index fields:

- ID
- PIDM
- DOCUMENT TYPE
- LASTNAME
- FIRSTNAME
- SSN
- BIRTH DATE
- ROUTING STATUS
- ACTIVITY DATE
- VPDI_CODE
- DISPOSITION DATE

Using the key reference system, a user only needs to enter an ID into the index structure and press Tab to move to the next field. This action populates data in the PIDM, LASTNAME, FIRSTNAME, SSN, and BIRTH DATE fields.

Lookups using a search

ApplicationXtender Document Manager has the following search features:

- To search against existing documents, press F4. The Result Set list includes a record for each indexed document. To narrow the results, enter a specific ID or name in the index grid before executing the search.
- To perform a search against unused key reference records (Banner data that has no indexed documents) *and* existing documents, press Shift+F4. The Result Set list displays a folder icon next to records that have indexed documents. Selections made from this list populate data into the index. To narrow the results, enter a specific ID or name in the index grid before executing the search.

ApplicationXtender Web Access has similar search features. These searches are performed by clicking the **Select Indexes** button (analogous to F4) or the **Key Reference and Indexes** button (analogous to Shift+F4). In both cases, the Result Set list can be narrowed by entering a specific ID or name in the index grid before executing the search.

Wildcard characters facilitate “fuzzy searches.” The characters for fuzzy searches are an asterisk (*) for multiple characters, and a question mark (?) for a single character. Wildcard characters may be used in the beginning, middle, or end of an entry.

Examples

Entering an ID value of 1234? yields a result set that includes ID values such as 12341, 12342, and 12343.

Entering an ID value of 123* yields a result set that includes all ID values that begin with 123 regardless of the number of characters in the ID.

Lookups in a MEP environment

Enabling a key reference table for MEP segregates data by campus or institution. If the key reference table used by a BDM application is enabled for MEP, then the key reference lookup returns ID information for the specific campus or institution associated with the ApplicationXtender login.

For details about creating and indexing documents using BDM in a MEP environment, refer to the *Banner Document Management Multi-Entity Processing Implementation Guide*.

Auto index system

The auto index (AI) system is available for BDM-delivered applications that contain fields for Banner data not included in the key reference system (that is, non-finance related applications and those other than B-%-ID).

The AI system contains data that cannot be included in the key reference system without creating multiple occurrences of the records. The main observable difference in the two lookup systems is the quantity of information available for the same ID.

To illustrate, if you know someone's ID you can easily find the name and birth date by using the key reference lookup process. However, knowing the ID does not mean that a specific tracking requirement, application number, or pledge number can be identified. There may be many occurrences of each, distinguished by other data elements such as term code or aid year. The AI lookup gains visibility into numerous, related occurrences of data.

The AI system can be invoked by pressing F7 key in ApplicationXtender Document Manager, or by clicking the **Auto Index** button on the ApplicationXtender Web Access indexing page.

Enabling an auto index table for MEP segregates data by campus or institution. If the auto index table used by a BDM application is enabled for MEP, then the auto index lookup returns ID information for the specific campus or institution associated with the ApplicationXtender login. For details about creating and indexing documents using BDM in a MEP environment, refer to the *Banner Document Management Multi-Entity Processing Implementation Guide*.

Attach pages to an existing document

A document can include multiple pages. When page 1 is indexed, a new document is established in the system. You can attach pages to an existing document. A document does not have to be displayed to attach a page to it.

Attach a page to a document displayed in ApplicationXtender Document Manager

Use the following steps in ApplicationXtender Document Manager to attach a page to a document that is not currently displayed.

1. Make sure that the existing document is displayed.
2. Select **Page > New**, then follow the instructions in either [Step 3](#) or [Step 4](#).
3. If you are scanning the new page:
 - 3.1. Select **Scan**. A shortcut menu is displayed.
 - 3.2. Select the location for adding the page (before the current page, after the current page, or at the end of the document). ApplicationXtender scans the page and attaches it to the displayed document.
4. If you are importing the new page:
 - 4.1. Select **Import File**. A shortcut menu is displayed.
 - 4.1. Select the location for adding the page (before the current page, after the current page, or at the end of the document). The Import File dialog box is displayed.

- 4.2. Navigate to and select the file that you want to import.
- 4.3. Click **Open**. ApplicationXtender imports the page and attaches it to the displayed document.



Note: The **Save** button is inaccessible. The database is automatically updated without any additional action from the user.

Attach a page to a document not displayed in ApplicationXtender Document Manager

Use the following steps in ApplicationXtender Document Manager to attach an unindexed page to a document that is indexed but not currently displayed.

1. After you scan or import a new file into ApplicationXtender, make sure that the newly added page is displayed with the index grid.
2. Press F4 or Shift+F4 to look up existing records. The Result Set list is displayed.



Note: F4 searches against existing records. Shift+F4 searches against unused key reference records *and* existing records

3. Select the document that is associated with the unindexed page.
4. Click **Attach**. ApplicationXtender populates index values in the grid and adds the page to the existing document.



Note: The **Copy Index** button copies most index values of an existing document into the index grid of a new document. If you use this feature, the document type should be different from the original index.

Attach a page to a document displayed in ApplicationXtender Web Access

Use the following steps in ApplicationXtender Web Access to attach a page to a document that is not currently displayed.

1. After you scan or import a new file into ApplicationXtender, make sure that the existing document is displayed.
2. Select **Page > New Page**. The Add New Page dialog box is displayed.
3. Select an option from the **New Page Insertion Point** drop-down list.
4. Enter a file path, or click **Browse** to locate the page that you want to add to the selected document.
5. Click **UPLOAD**. ApplicationXtender loads the page and adds to the displayed document.

Using Context Rules and Queries

Banner® uses rule-based functionality to launch a query within ApplicationXtender. The query results are based on the location of the cursor on a Banner form and, potentially, the data values in key specific fields on that form. Context rules link the behavior of integrated ApplicationXtender to the cursor location on a Banner form.

Banner is delivered with several hundred pre-defined rules that represent integration behaviors found to be most desirable. Your institution can change or remove these rules, if they are inaccurate representations of your processing style.

Refer to the *Banner Document Management Administration Guide* for more information about context rules.

Context rules

Context rules are based on the cursor location (context) on a Banner form. When you click the **BDM - Display Document** button on the Banner toolbar, ApplicationXtender Document Manager or ApplicationXtender Web Access is launched and a query is run, based on the location of the cursor on the form. Typically, the parameters of the query include an ID, the document type to be retrieved, and other key pieces of data, such as term code or aid year.

There are four levels of context rules in BDM:

- *Form-level rules* run a query from any location on the Banner form.
- *Block-level rules* run a query from any location within a specified block on a Banner form.
- *Item-level rules* run a query from a specified field on a Banner form.
- *Item-value-level rules* run a query based on the value of the specified field on a Banner form.

The priority of rules, from lowest to highest is form, block, item, and item-value. A rule can be superseded by another rule that has higher priority. If two or more rules apply to a cursor location, the highest priority rule takes precedence. For example, if an item-level rule and block-level rule apply to a specific field, the item-level rule has higher priority and is used to run the query.

Example 1 (form-level rule)

Clicking the **BDM - Display Document** button anywhere on SPAPERS queries the B-S-ID application for all document types. The absence of a specific value acts as a wild card.

Form Name	Block Name	Item Name	Item Value	BDM Application	Document Type
SPAPERS				B-S-ID	

Example 2 (block-level rule)

Clicking the **BDM - Display Document** button anywhere in the SARADAP block on SAAADMS queries the B-S-ADMN application for the Admission Application document type.

Form Name	Block Name	Item Name	Item Value	BDM Application	Document Type
SAAADMS	SARADAP			B-S-ADMN	ADMISSIONS APP

Example 3 (item-level rule)

Clicking the **BDM - Display Document** button in the `SPBPERS_SSN` field of the SPBPERS block on SPAPERS queries the B-S-ID application for the Social Security Card document type.

Form Name	Block Name	Item Name	Item Value	BDM Application	Document Type
SPAPERS	SPBPERS	SPBPERS_SSN		B-S-ID	SSN CARD

Example 4 (item-value-level rule)

Clicking the **BDM - Display Document** button in the SPBPERS_DEAD_IND field when it has a field value of Y in the SPBPERS block on SPAPERS queries the B-S-ID application for the Death Notice Documentation document type.


Form Name	Block Name	Item Name	Item Value	BDM Application	Document Type
SPAPERS	SPBPERS	SPBPERS_ DEAD_IND	Y	B-S-ID	DEATH NOTICE

Queries

You can quickly search for a document or image by querying ApplicationXtender from Banner.

Run a query from Banner

Use the following steps to query ApplicationXtender from Banner.

1. Access the appropriate form in Banner.
2. If the query can be executed at block-level, item-level, or item-value-level, place the cursor at the appropriate location on the form.
3. Click **BDM - Display Document** . Results are displayed in ApplicationXtender Document Manager or ApplicationXtender Web Access.

A query from most key blocks returns a set of documents related only by ID. Most forms are delivered with a key block-level context rule that searches the associated B-%-ID application using ID as a parameter.



Note: The ampersand (%) represents a Banner functional area (product).

Count matched documents from Banner

Use the following steps to count the number of documents that match the query parameters.



Note: If no context rule is setup for the Banner form, then the query uses default application B-G-ID.

1. Access the appropriate form in Banner.
2. If the query can be executed at block-level, item-level, or item-value-level, place the cursor at the appropriate location in the form.
3. Select **Tools > Banner Document Management > Count Matched Documents**. A count of documents that match the query parameters is displayed.

The specific information that is passed to ApplicationXtender Document Manager or ApplicationXtender Web Access is determined by the context rule that is defined for the form, block, or item where your cursor is located. The count returned by the query depends on your location within the form.

Using Banner Requirements Linking

Banner® requirements linking is the functionality within Banner Document Management (BDM) where a Banner table is updated automatically when documents are indexed in BDM. This functionality is provided in the following BDM applications:

- B-R-TREQ (Financial Aid Tracking Requirement)
- B-S-ADMN (Student Admissions)

Indexing a document in one of these BDM applications essentially marks the Banner record as “received.” There is no need to manually update Banner.

Refer to the *Banner Document Management Administration Guide* for more details about requirements linking.

Financial aid tracking requirements

Within Banner Financial Aid, the tracking requirements checklist includes the documents that are required for a financial aid application (for example, a savings statement). When a required document is indexed in ApplicationXtender, tracking requirements on the Applicant Requirements Form (RRAAREQ) are updated automatically.

The BDM administrator uses the Document Management FinAid Requirements Linking Form (ERALINK) to define the rules that apply when indexed financial aid documents create or update tracking requirements in Banner. Refer to the *Banner Document Management Administration Guide* for details on configuring the linking rules. You should review the rules with your BDM administrator to understand the relationship between Banner and the documents that are maintained within BDM.

Requirements can be updated as needed or removed from Banner if the requirement is no longer applicable.

Policies regarding the use of requirements tracking vary by institution. You should know how your site has configured this feature.

Insert requirements

B-R-TREQ can create a new requirement into the Banner database when a document is received.

Based on the Banner linking rules configured on ERALINK, and additional BDM settings configured by the system administrator, a new document may be identified by its index values as a requirement. If that record does not yet exist on the RRRAREQ table, a new tracking requirement record is inserted into the appropriate table when the document index is saved.

The insertion of a new tracking requirement in the RRRAREQ table depends on requirements linking rules that stipulate that the tracking requirement (in the RTVTREQ table) must be active. If the tracking requirement has a fund assigned to it, then the fund (in the RFRBASE table) must also be active. If either is inactive, then the BDM requirements linking process does not insert a tracking requirement into RRRAREQ and the document index is not saved. The BDM linking rules on ERALINK also depend on the tracking requirement active indicator and the fund code active indicator.

Delete requirements

A subsequent deletion of a BDM document rolls back the Banner record to a value that is defined in the linking rule on ERALINK. An exception to this rule is that financial aid tracking requirement status values might not be restored if any of the following conditions exists:

- The document is not the only document that could have updated the status of the tracking requirement.
- The requirement type is one for which Banner's "Satisfy All" indicator was set on the Tracking Validation Form (RTVTREQ) and the requirement's status was set indirectly, as a result of BDM satisfaction of another occurrence of the requirement within the same aid year.
- The requirement type is one for which Banner's "Once" indicator was set on RTVTREQ and the requirement's status was set indirectly, as a result of BDM satisfaction of another occurrence of the requirement within another aid year.

If a document was linked to a requirement that is considered "Satisfy All" or "Once" and the document is deleted, you must review the tracking requirements on RRAAREQ and manually reset status values for any incorrect items. Failure to do so might result in inaccurate Banner data and, potentially, the improper distribution of funds.

Requirements linking in a MEP environment

The VPDI_CODE index field supports the Database Extension Utility and Multi-Entity Processing (MEP). This text field is used in a MEP environment to identify the campus or institution code to which a document index is assigned. This field corresponds to the VPDI_CODE field in a Banner table record in a MEP environment.

If your institution uses MEP and has enabled the RRRAREQ table for MEP, then the BDM application B-R-TREQ must also be enabled for MEP. In this case, BDM updates or inserts the financial aid tracking requirement based on the VPDI_CODE assigned to the tracking requirement record.

For details about the update of financial aid tracking requirements in a MEP environment, refer to the *Banner Document Management Multi-Entity Processing Implementation Guide*.

Student admissions requirements

Within Banner Student, the admissions requirements checklist includes the documents that are required for an admissions application (for example, a high school transcript). When a required document is indexed in ApplicationXtender, admissions requirements on the Admissions Application Form (SAAADMS) are updated automatically.

The BDM administrator uses the BDM Student Admission Requirements Linking Form (ESALINK) to define the rules that apply when indexed admissions documents create or update requirements in Banner. Document types can be linked to specific checklist requirements. Refer to the *Banner Document Management Administration Guide* for details on configuring the linking rules. You should review the rules with your BDM administrator to better understand the relationship between Banner and the documents maintained within BDM.

When a document is indexed in BDM, an admissions requirement is marked as “received” using values that meet the criteria in the linking rule. Depending on the configuration of the rule, updates can occur in one of the following scenarios:

- A specific request type in a specific application, for a specific term
- A specific request type in all applications, for a specific term
- All occurrences of the request type, regardless of term

Each time a Banner record is updated through ApplicationXtender, a message alerts you that activity in B-S-ADMN updated, inserted, or deleted Banner information. This message can be turned off by the BDM administrator.

Requirements can be updated as needed or removed from Banner if the requirement is no longer applicable. Removal of a requirement in Banner will not delete the document in BDM. You must delete the document manually.

Policies regarding the use of admissions requirements vary by institution. You should know how your site has configured this feature.

Insert requirements

B-S-ADMN can create a new requirement into the Banner database upon receipt of a document.

Based on the Banner linking rules configured on ESALINK, and additional BDM settings configured by the system administrator, a new document may be identified as a requirement based on its index values. If that record does not yet exist on the SARCHKL table, a new requirements record is inserted into the appropriate table when the document index is saved.

Delete requirements

Admissions requirements roll back to an unsatisfied state if the supporting BDM document is deleted or changed in such a way that its index no longer matches the requirement. The BDM administrator can use linking rules to enable or disable this capability. Rollback only takes place when *all* of the following conditions are true:

- The index was deleted or changed in such a way that it no longer fulfills the requirement.
- The BDM administrator enabled the undo capability at both the global and rule levels.
- No other BDM documents exist that continue to support the individual requirement's satisfaction.

Requirements linking in a MEP environment

The VPDI_CODE index field supports the Database Extension Utility and Multi-Entity Processing (MEP). This text field is used in a MEP environment to identify the campus or institution code to which a document index is assigned. This field corresponds to the VPDI_CODE field in a Banner table record in a MEP environment.

If your institution uses MEP and has enabled the SARCHKL table for MEP, then the BDM application B-S-ADMN must also be enabled for MEP. In this case, BDM updates or inserts the student admissions requirements based on the VPDI_CODE assigned to the student admissions requirement record.

For details about BDM updating of student admissions requirements in a MEP environment, refer to the *Banner Document Management Multi-Entity Processing Implementation Guide*.

Security

Data contained in Banner® Document Management (BDM) can be protected by the following security methods.

Document level security

Document level security allows you to enable or to limit access to specific information on a group-by-group basis. Document level security is established for individual fields of applications by using ApplicationXtender Application Generator.

For more information, refer to the *Banner Document Management Administration Guide*.

Banner security

The same methods of security that are used within Banner are enforced within BDM. Multiple security methods provide a “layered” security system. Each method operates independently from the others. A denial of access in any one method results in a complete denial of access to the document, regardless of success in another method. Information about denial of access is displayed on the screen at the time of denial and recorded in the BDM Error Results table (EXRRSLT).

Although BDM does not support multiple indexes, baseline ApplicationXtender can be configured to allow multiple indexes for a document. If multiple indexes exist, then the security methodology is applied to each case. A denial of access in any one case results in denial of access for all cases of the document.

Banner Finance

If fund/organization security is enabled for Banner Finance, this level of security is enforced on BDM documents in the BDM Finance applications. This level of security is controlled through Banner, not through BDM.

When a query is performed, all matching documents are displayed. If, however, you try to access a document and you do not have the appropriate access rights for the document, a fund/organization security message is displayed in ApplicationXtender Document Manager or ApplicationXtender Web Access. Although the message indicates that an error occurred, the true nature of the event is that during the course of opening the file, the Banner fund/organization security test failed.

Banner Human Resources

If security is enabled for Banner Human Resources, this level of security is enforced on BDM documents in the BDM Human Resources applications. This level of security is controlled through Banner, not through BDM.

When a query is performed, all matching documents are displayed. If, however, you try to access a document and you do not have the appropriate access rights for the document, a security message is displayed in ApplicationXtender Document Manager or ApplicationXtender Web Access. Although the message indicates that an error occurred, the true nature of the event is that during the course of opening the file, the Banner Human Resources security test failed.

Glossary

Annotation

A markup, typically a note or highlight, that is applied to an image to focus attention on a particular part of the page.

Auto index system

A lookup feature that contains examples of repeating Banner® data related to a common ID.

Banner Document Management (BDM)

Combination of ApplicationXtender Document Manager and/or ApplicationXtender Web Access with all Banner software to integrate the products into a functional model where Banner can drive ApplicationXtender.

BDM application

Index-driven data storage structure where documents can be stored and retrieved.

BDM - Add Document

Button on the Banner toolbar that opens ApplicationXtender Document Manager or ApplicationXtender Web Access so that a new ApplicationXtender document can be created from data stored in Banner.

BDM - Display Document

Button on the Banner toolbar that opens ApplicationXtender Document Manager or ApplicationXtender Web Access so that a query can be performed.

Context

Location within a Banner form where the cursor is located when you click the BDM button to access ApplicationXtender and create a query.

Data reference field

Field that provides data that is derived from a single key reference field. For example, LAST NAME (data reference field) is derived from ID (key reference field).

Data source

Container for connection information that enables an application to connect to and receive data from a particular database.

Document

File or group of files stored in an application and identified by a unique set of index information. Each page of a document is a single object, such as a scanned image file or a word processing document. A document can be small (one page) or large (thousands of pages).

Document type

User-defined code that identifies each type of document that is stored and indexed in a BDM application.

OpenText

The Ellucian partner for the integrated BDM solution.

Index

Group of fields where information relating to a documents is stored. When a document is stored in an application, the index values that you enter identify the document.

Key reference system

A lookup table that contains data used frequently during the indexing process.

Multi-Entity Processing (MEP)

An environment that enables two or more entities (institutions or campuses) to coexist in a single application architecture. MEP uses Oracle's Virtual Private Database functionality to implement the policies required for this coexistence.

Page

Single object within a document. Each page of a document shares the document's index values.

Requirements linking

Rules that facilitate the update of financial aid tracking requirements and student admissions requirements based on activity in BDM.

VPD

Oracle's Virtual Private Database, which implements row-level security using Fine Grained Access Control (FGAC) for user-defined security policies. This allows data

segregation by campus, institution, or entity using the `VPDI_CODE` column (index field) in Banner and ApplicationXtender tables.