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MX365

# Release Notes 8.5.0

*August 28, 2020*

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# ENHANCEMENTS

## Administration

| Name | Description |
|---|---|
| **Admin Toolbar – Refresh Cache/Metadata**<br>Refresh MX Cache and Metadata from the MX Admin Toolbar. | Whenever changes are made in UX such as a schema change or modification to a setup record / Advanced Find, it is necessary to refresh the MX Cache or run the Metadata Refresh utility to have the change(s) reflected in the MX website. Until now, these actions had to be done in UX in the MX Administration menu, which is only accessible to UX system administrators. Now, the MX site Administrator can execute the refresh at any time directly from within MX using a new tab on the Admin Toolbar. *Note that when the Metadata Refresh is run it is updated with the current system date. |
| **All Web Parts – Redesigned Configuration**<br>Redesigned User Interface for all configuration forms. | When the user interface for MX was redesigned in MX 8.2.0, the one area that was not enhanced was the configuration form for all of the web parts. In MX 365, that user interface redesign has now been applied to the configuration forms. There are several global aspects to this redesign, along with many web part specific refinements:<br>• The same Bootstrap stylesheet components that enable responsiveness, flow down inheritance of styling, and an attractive graphical interface of the whole MX product now also provide those same attributes to the configuration forms.<br>• The user interface is streamlined, responsive, and organized by collapsing and expanding form sections, so it is easy to navigate quickly to specific settings without having to scroll down through a long list of mixed settings.<br>• Located on the Administrator tab of every web part configuration form, a date/time stamp is now captured for CreatedOn, CreatedBy, ModifiedOn, ModifiedBy.<br>• Save and Cancel buttons are always visible at the top of the form, so it is not necessary to scroll down to the bottom of the settings in order to save. In addition, there is a new option to expand the configuration form to fill the screen or reduce back to a fixed size, as preferred.<br>• Web part Advanced settings are grouped by categories, instead of mixed together, for easier navigation. The categories are: Options, URLs, Form Text, Instructions and Messages.<br>• Settings are given different input field lengths depending on type, so URLs have full width fields, while button text settings are two across.<br>• Tooltips on URL fields guide the user as to the expected syntax and format to use, including which URL settings need a particular parameter appended.<br>• Large and complex groups of settings, such as those involved in MX Find and MX Form, are laid out in responsive grids, and use a Bootstrap modal form to show optional settings at far-right without scrolling to the right. If the admin sets any options in one of those modal forms, the configuration grid highlights the row so that even when the form is closed, it is clear to the user that they have modified the default setting(s). |

## Customer Module

| Name | Description |
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| **Addresses – Address Type**<br><br>**UX 365 Exclusive**<br><br>Option to display Address Type. | Previously, Address Type was not displayed in MX addresses because there is no global option set for addresses in the Microsoft Dynamics database, and each address type field (contact address1, contact address2, account address1, account address2, and more addresses) could have a different definition of the address type option set. In the past, discrepancies between the labels for the same option set numeric values resulted in incorrect labels being displayed. Because the option set values for Address Type can be synched using the Address Type Setup utility in UX 365, MX can now expose the picklist values online. For example, selecting an Address Type of 'Work' for Contact address 1 will match selections of 'Work' in all other address blocks.<br><br>Some things to note about this enhancement:<br><br>1. This UX utility is not automatically run by Protech as part of the upgrade.<br><br>2. Do NOT run the Sync Address Utility without consulting a Protech Solution Consultant first. An analysis must be done to ensure that running the utility will not adversely affect existing Address Type data.<br><br>3. In MX 365, a new configuration setting named 'Display Address Type' has been added to the Admin Toolbar. Located on the Configuration Tab in the Addresses form section, when 'Display Address Type' = True, Address Type will display in web parts using the field. When 'Display Address Type' = False, the value is hidden. The default value is hidden. |
| **Create New User, My Company – Validate Parent Account by Email**<br><br>**UX 365 Exclusive**<br><br>Validate that user's Email matches the parent account's Domains if selected account is a Member. | For organizations that have company memberships that flow down automatically to employees of the member company, it is important to be able to prevent users from claiming falsely to belong to a company just to get those member benefits. Now MX uses the email domain of member companies to verify that a user's email domain is valid for the company they claim to work for.<br><br>In UX 365, a new field has been added to the Web tab of the Account form. The new field is named "pa_emaildomain" - Display Name = 'Email Domains (use comma to separate domains)'. This field is used to enter one or more email domains, separated by commas, to identify which domains are valid for employees of that account. When the user selects their parent account in MX, using either the Create New User Account or My Company web part, if there are any values in the "pa_emaildomain" field, validation logic is automatically executed comparing the domain of the user's email address with the domains that have been defined for the account. If the user's email domain is one of the values in that field, then the selected account is accepted as the contact's true parent account. If not, then MX displays an error message rejecting the selection of this account as the parent customer. Note that if "pa_emaildomain" is empty then no validation is run.<br><br>It is recommended that accounts applying for membership be required to fill out the 'pa_emaildomain' field so all member companies have at least one value to compare. In addition, Protech recommends sending confirmation emails to all new contacts to make sure that the email they entered is in fact their true address where they receive communications. |

| Name | Description |
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| **Related Companies – Manage only by Primary Contact**<br>Removed "More" link that allowed users to edit and manage companies from this web part. | The Account – Related Companies web part displays parent and child companies in a hierarchical tree diagram. As originally designed, the user could click a 'More' link that would select an account from the list, populate the page URL with the selected Account GUID and all of the account web parts would change to that account's information.<br>This functionality has been removed because the presumption that a user should have primary contact privileges to all related accounts is generally not valid. Instead, new functionality has been added that allows a user to select companies to manage only if they are identified as a Primary Contact for an account. This new functionality is made possible by the new 'Set Context Variable' Global web part. See item 6 in this document for additional detail.<br>The Related Companies web part is still used to show related companies, it is just no longer possible to configure the account web parts to edit a company selected from this web part. |

## Multiple Modules

| Name | Description |
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| **NEW Web Part: Global – Set Context Variable**<br><br>Set value for new MX context variables – RelatedAccountID, MeetingID, ChapterID. | MX 365 adds a new group of context variables that can be referenced automatically in a variety of web parts, such as MX Find and Form, without needing to pass them via a URL parameter or via hard-coded Advanced Finds. The new context variables include Related AccountID, MeetingID, and ChapterID.<br><br>The original context variables are contactid and accountid, which are initialized upon login as the user's contactid and parent accountid. The new context variables are initialized using one of two methods:<br><br>1. Via selection of an account, meeting, or chapter record using MX Find, so that the record is identified in the URL. A new MX web part, 'Global – Context Variable', then captures the selected record GUID and saves it in a named variable for the duration of the user's session, so it no longer needs to be passed from page to page via URL. Using this method, no button is visible until after the user has made a selection in the MX Find, placing the GUID in the URL. At this point the new Context Variable web part will display the navigation button.<br>2. For a Meeting or Chapter, the new 'Global – Context Variable' web part allows an Admin user to select a single setup record, just like the Global – Start Process web part. Using this method, the navigation button is immediately displayed because the Context Variable web part already has the information it needs for the redirect.<br><br>**Configuration**<br><br>The only visible aspect of this web part is a button, just as with Start Process. Configuration of this new web part contains the following components:<br><br>• The name of the context variable whose value will be set.<br>• The name of the URL parameter that contains the value to be saved as the context variable.<br>• Button text for the button that the user clicks to save the context variable value.<br>• The URL to go to where the context variable will be used. This can be a page for managing related accounts, a chapter portal, or a website dedicated to a particular meeting.<br>    • Optionally, the user can select either a MeetingID from the 'Select Meeting' setting or a ChapterID from the 'Select Chapter' setting.<br><br>**A context variable can be used by multiple web parts:**<br><br>• MX Find Search forms can be configured to filter automatically by a context variable. For example, a chapter portal can be configured to filter all queries on all pages by the designated context-ChapterID, or a meeting website can filter all queries by the designated context-MeetingID.<br>• MX Form data forms can be configured to default automatically to a context variable, so new records are automatically assigned to a particular chapter, meeting or account.<br>• All Account and Customer web parts can be configured either for AccountID, the user's parent company, or for RelatedAccountID, (a selected company |

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| | that the user is primary contact for.) This makes it possible for a user to manage multiple companies and have full editing control for each of them. Because RelatedAccountID is saved in a separate context variable from AccountID, some pages can refer only to the user's parent, while others refer to a managed company.<br>• All Meeting web parts can reference MeetingID either From URL or from Context when configured as Context-MeetingID. If there is no MeetingID in the URL, then the context-MeetingID is read.<br><br>**Location and Duration of variables:** Initially the context variable is stored in an encrypted cookie (**PTContext**). The PTContext cookie is removed when the user is signed out of the MX site. |
| **Controllers – Save AppID as a Context Variable**<br><br>Save AppID as a context variable instead of as a URL parameter. | When a Controller web part creates the AppID for a registration or membership process, it has always saved this identifier as a URL parameter that was passed by the Navigation Bar from page to page via Application Mode. This is no longer the case. Now the Controller saves AppID as a context variable instead.<br><br>The reason for making this change is that navigation was inhibited when it was dedicated to the AppID. With AppID safely identified invisibly as a context variable, all navigation can proceed freely without risking losing the AppID reference. For instance, clicking a Navigation Tab to return to a previous step can be enabled via simple hyperlinks, which was not possible when only the Navigation Bar had the ability to pass the AppID parameter.<br><br>In addition, supporting MX Finds can be used to search and make selections within the process that pass values via URL parameters, without interfering with the continuity of the application.<br><br>When the registration or application is submitted to the cart, or when the controller is accessed for a different application/registration process, the Context-AppID is cleared from the context variable, so the user can proceed with a new application record for another process. |
| **Report Viewer – Display FetchXML Reports as PDF's**<br><br>**UX 365 Exclusive**<br><br>MX Report Viewer for FetchXML reports in UX. | The MX Report Viewer web part has been enhanced so that it can work with either an SRS report or an FetchXML report. The web part dynamically understands the environment in which it has been deployed and conditionally uses either SRS or FETCH XML. In UX 8.2, UX reporting is implemented via SRS Report Server, which is SQL-based. In UX 365, reporting is implemented via FetchXML reporting because there is no support for a separate Report Server solution or SQL. Now one Report Viewer web part supports both reporting methods.<br><br>The new MX Report Viewer relates to UX 365 reports in the same way as the previous Report Viewer did, in that it reads UX reports directly and can pass filtering parameters to the report either via URL parameter or context variable. But it differs in several significant ways:<br>• When the UX 365 Generate Report Token credentials are populated in UX 365, UX Reports can be displayed in the MX Report Viewer without having to be published for external use. These credentials are populated by Protech during implementation.<br>• Reports are rendered in MX as PDF, not as SRS reports, so the option to download and print are immediately applicable, without requiring a preliminary conversion to PDF.<br>• The web part cannot prompt for filtering values via user input. |

## Global MX Find/MX Form

| Name | Description |
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| **Multi-select Picklist Fields**<br>**UX 365 Exclusive**<br>MX Support for UX Multi-select Picklist Data Type. | Microsoft introduced a new datatype called "Multi-select Picklist" with Dynamics 365, and it has been incorporated into UX 365. Multi-Select Picklist controls display an option set, as with regular option set fields, but with this data type, the user can select more than one option from the dropdown list using checkboxes. The selected values are then displayed in the field as a list, separated by commas.<br>With MX 365, the exact same functionality is available to an online user when updating this type of field in MX Form.<br>MX Form recognizes the new data type and when the user focuses in the field, the dropdown automatically opens with checkboxes by each option so the user can select more than one value. With each value that is checked, the name of the option is added to the field, separated by commas, and this is what is displayed when the field loses focus.<br>The user interface in the MX Find Search form is the same as with a traditional option set field, which has always allowed the user to select more than one picklist value to search on. What is different is the way that the multi-select picklist field value is searched by MX Find. MX Find does not look for an exact match where only a particular value was entered, but for the option value to be one of the entered values in that field. |
| **'Today's Date' Variable**<br>New variable for referencing 'Today's Date' as a search filter or default value. | A new option has been added to the configuration of both MX Find and MX Form to be able to reference 'Today' as a search filter or default value for any date field.<br>The new picklist value named 'Today' has been added to the 'Display' dropdown list setting of the MX Find web part configuration form, along with existing picklist values of Hide, Show, From URL, Context and Radius Search. Selecting 'Today' in this context will filter records where the date = the current date when it is being viewed.<br>This enhancement overcomes a problem with running an Advanced Find created for 'Show me records where the date is less than or greater than Today'. When saved, UX immediately translates the comparison filter of 'Today' as a specific date that does not change when the query is run again in the future. Workarounds for this problem required using 'Next x months' or 'Previous x days' comparison filters. Now the Advanced Find can be written using 'Today' as a placeholder that will be automatically translated by MX as Today at any point in the future.<br>The same 'Today' option has also been added to the 'Default' setting of the MX Form web part configuration form, along with existing picklist items of Value, Context, and URL, so a date field on the form can automatically be populated with the current date when the record is being created online. |

| Name | Description |
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| **Section Name Display Options**<br><br>Option to hide a Section Name within the form. | When configuring MX Form fields (or editable fields in MX Find), one can only select fields for display if the back-office form section is also selected for display online. In the past, it was possible to overwrite the section title for a visible section, but it was not possible to hide the section title. This resulted in forms that were more fragmented than desired if the displayed fields came from multiple sections.<br><br>Now, when selecting a section for display in an MX Form, there is an option to display the title or not. This means that fields from multiple back-office form sections can be displayed online as if they are in a single section. |
| **Image proportions**<br><br>Modification to C*SS* to improve display of Catalog and Directory images. | When MX templates display images for a list of items, as in a membership directory or product catalog, it is desirable for all images to be displayed at the same height and width to preserve consistency and order. But when the individual images have different proportions, the styling used by MX to enforce this consistency has resulted in awkward cropping to force them to fit.<br><br>Now, MX templates no longer enforce the same proportions on all directory and catalog images. The height is fixed, but the width is automatically re-calculated to preserve the correct proportions for each image. |

## Meetings and Registrations Module

| Name | Description |
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| **My Registrations – Cancel Registration**<br>**UX 365 Exclusive**<br>Cancel Registration online and automatically add Cancellation Fee. | The My Registrations web part can now be configured to allow the user to cancel an existing registration, in addition to viewing registration details, editing registration choices, or transferring registrations to someone else.<br>When the user clicks 'Cancel', a message is displayed asking for confirmation that the user really wants to cancel. If the meeting setup for the cancelled registration also contains a cancellation fee, an additional paragraph is displayed alerting the user that a cancellation fee will be subtracted from the amount to be credited to their account. The text of this message is configurable. *Note that because the 'Cancel Registration' validation message is a web part setting, it is applicable to all meetings. Please ensure that the message is generic enough so that it makes sense for all meetings.<br>If the user clicks OK to proceed, MX updates the registration invoice by cancelling the registration line item and adding the registration for cancellation fee, if applicable. The resulting credit balance (if previously paid) can be resolved later in UX by back-office staff, just as with other credit scenarios. No refund is delivered via MX.<br>This functionality is available only for clients with UX 365, because the API that executes the cancellation logic has been developed only in UX 365. |
| **Free Registrations Bypass Shopping Cart**<br>Bypass Shopping Cart for zero-dollar registrations. | When a user registers for a free meeting, it seems to them like an unnecessary barrier to have to use the shopping cart to process what they see as a non-financial transaction. To streamline the user experience in this scenario, both the Start Registration and the Registration Summary web parts can be configured to automatically skip the Shopping Cart completely during Checkout if the registration total = $0. The user will receive a Thank you confirmation message, without any indication that this was a financial transaction being processed.<br>The Event – Start Registration web part invokes this logic for simple meeting registrations, so a free simple meeting requires only one click to go from meeting home page to "Thank you". The Registration Summary web part invokes it for both one-part Quick Registrations (hidden) and for multi-step registration processes (displayed).<br>In both web parts, there is a new processing mode called 'Checkout' that can be selected in place of the previous 'Submit to Cart' behavior. The Checkout mode uses a new URL setting to redirect to the 'Thank You' page instead of displaying the cart.<br>Behind the scenes, the Registration Summary web part does create Shopping Cart transactions and processes them immediately in UX to create the $0 invoice line items. This temporary cart is processed separately from the global cart, so a zero-dollar registration will ignore any items that may be already added to the cart, and it will process only that one transaction. |
| **Restrict Registration Access by FetchXML Query**<br>**UX 365 Exclusive** | New hide/show logic has been added to the MX Registration and Session selection web parts, so a user/registrant must be included in the results of a predefined query in order to select certain registrations or sessions.<br>There are many registration scenarios where an organization may want to setup registrations or sessions that are limited to a particular defined group. Limiting eligibility for registrations makes it possible to create a registration with special pricing that is granted to a particular group, such as employees of a sponsoring |

| Name | Description |
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| Restrict who can register for specific registrations and sessions via FetchXML in Setup. | company or chapter. Special pricing does not have to be limited to registrant price lists if the entire registration is available only to designated recipients. Sessions also may be targeted to specific audiences – some conference sessions may be used as committee meetings, so only members of the applicable committee should be eligible to select it, and some sessions may be reserved for certified individuals.<br><br>For these types of scenarios, any advanced find could be used to identify the universe of individuals who are eligible to select specific registrations or sessions. So the eligible list will be defined for each registration setup / session setup individually in the UX setup. In UX 365, a new 'FetchXML' field has been added to the Meeting Setup, Registration Setup, and Session Setup entities, where the FetchXML for any contact query can be pasted and applied to that specific registration or session. A registrant must meet the requirements of the FetchXML query in order to select that registration/session during online registration. Note that UX will not apply this same logic during registration transaction entry, this logic exists only for online registrations via MX.<br><br>If the FetchXML field is not empty, MX will execute the attached query and determine if the contactID of the selected registrant/web user exists in the query results. If so, the registration is visible and selectable. If not, the registration is hidden from the list. The same logic applies in the Select Sessions and Guest Registration web parts.<br><br><u>Setup Instructions for adding FetchXML Restrictions in UX</u><br><br>*The following content is described within the context of Meeting Registrations. All items in the list also pertain to Meeting Setup and Session Setup as well.<br><br>1. The Query must be defined on the Contact entity, so that the result returns a list of Contacts, not a related entity such as Committee Member.<br>2. When copying and pasting FetchXML into one of the new Limit FetchXML fields you MUST pass the content through Notepad first. Do not copy and paste this content from a Word document, Notepad +, or any other XML editor, because they insert spurious code. The FetchXML must be as raw as possible. Failure to follow this guideline will result in an the FetchXML throwing an error in MX.<br>3. You do not need to write FetchXML directly. You can download the code from any Advanced Find as follows:<br>  a. Open the desired Advanced Find and click 'Download FetchXML'.<br>  b. Save the file to disk.<br>  c. Open the file directly in Notepad.<br>  d. Delete any text prior to '<fetch>'. Scroll to the bottom of the FetchXML field in UX and confirm that the last line is '</fetch>'.<br>  e. Copy the entire remaining Notepad content and paste it into the appropriate Limit FetchXML field.<br>  f. Double check that the entire content from <fetch> through </fetch> has been inserted.<br>4. When adding or editing FetchXML content in UX, it is NOT necessary to Reset Caches. MX calls the FetchXML directly from UX.<br>5. When determining which registration or session options should be displayed, the first thing that MX does is to evaluate the integrity of all Registration Setup records REGARDLESS of the value of 'Publish to Web'. So, if there is |

| Name | Description |
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| | bad FetchXML in any Meeting Registration record within the meeting, the related Select Registration web part in MX will fail, even if the bad FetchXML is in an unpublished registration or session. This is important to know for troubleshooting, because just setting 'Publish to Web' = FALSE, will NOT bypass the integrity check that MX executes. Publish to Web Is evaluated from within the MX web part later when it comes time to render content in the web part.<br>6. If there are errors related to the FetchXML, clear the entire field for all registrations or sessions and recopy the FetchXML from a valid Advanced Find for each setup record, one at a time. For this reason, it is important that you save any advanced find that is being used as a source of FetchXML. |
| **Meeting Speakers – Added to MX 365**<br>**Event - Speakers web part** | The Event - Speakers web part has been added to the DNN Gallery of Web Parts, making it possible for an MX Administrator to deploy the web part to a page in MX 365/ UX 365. The Event – Speakers web part was temporarily removed from the DNN Gallery of when UX 365 was first released, because initially the UX 365 rebuild did not support Speakers and Facilities. |
| **Manage Exhibit Representatives - Added to MX 365**<br>**Manage Exhibit Representatives web part** | The Manage Exhibit Representatives web part has been added to the DNN Gallery of MX Web Parts, making it possible for an MX Administrator to deploy the web part to a page in MX 365/ UX 365. The Manage Exhibit Representatives web part was temporarily removed from the DNN Gallery when UX 365 was first released, because initially the UX 365 rebuild did not support Exhibits. |

**Membership Module**

| Name | Description |
|---|---|
| **NEW Web Part: Membership – Join Group**<br><br>Group Join to buy individual memberships for employees of the user's company. | A new MX web part, 'Membership – Join Group' allows the user to purchase individual memberships for one or more contacts in their company. There is no Account Membership involved in this functionality, only multiple contact memberships.<br><br>The user enters the name of each contact into an Autofill field, which searches for the name among the non-member contacts in the user's parent company. The user selects the name and then presses 'Enter' to add the name to the list of group members. They can then select another name or add a new contact, who will automatically be assigned to the user's company. When the list is complete, the user clicks the 'Buy Membership' button to add a membership transaction to the cart for each selected contact.<br><br>The shopping cart contains individual membership detail lines for each individual's membership transaction and is now able to process multiple primary benefit transactions for contacts other than the user. Both Benefit and Rate are pre-defined via web part configuration, as with the Quick Join web part. When processed, each member will have their own renewal billing and membership invoice for the same benefit and rate. Each contact's membership is renewed separately, as if they had purchased it themselves. |

## Promotion Packages

| Name | Description |
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| **Packages Containing Exhibit and Advertising Package Details**<br><br>Purchase Packages with Exhibit Booth and Advertising as Package Detail components. | When the MX Shopping Cart processes a Promotional or Sponsorship package, all of the individual types of transactions included in the package are added to the back-office invoice according to their unique invoicing rules and with all supporting details. In the past, this limited which types of transactions could be included in an MX-supported package, because MX did not have modules for Exhibit Sales or Advertising Sales. This limitation has now been removed.<br><br>Now any type of transaction that can be added to a package in UX can also be part of a package that is sold online via MX.<br><br>This new capability is especially important for organizations that use packages to sell sponsorship contracts, which bundle exhibit booth, advertising, and sponsorship items into a single order, paid on behalf of the company. In addition to the exhibit booth product, the package may include miscellaneous exhibit products such as electricity and Wi-Fi, and a predefined number of exhibit reps.<br><br>If the package includes exhibit representatives, they will automatically be assigned to the same Placeholder contact used for packaged registrants, and the user can either assign specific contacts or wait until later, just as with packaged registrations.<br><br>Similarly, with advertising, the user has the option to select a particular publication issue, which is not predetermined in the Package Setup.<br><br>Note that this functionality applies only to packaged transactions. A future release will add Exhibit Booth sales as a standalone e-commerce module, including full UI for selecting exhibitor and advertising options. |

## Product Sales

| Name | Description |
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| **Product Catalog – Display Backorder Message on Add to Cart**<br><br>Display Backorder message on Add to Cart and prevent Add to Cart when Allow Backorder = false. | Previously, only UX had logic to determine the difference between quantity ordered vs. available quantity for sales inventory product sales, so MX was unable to alert the user if a product would need to be back-ordered until the shopping cart was processed and UX logic was invoked. Now the MX Product Catalog web part will check if a backorder is needed before adding a selected product to the Shopping Cart.<br><br>When the user clicks 'Add to Cart', the MX Product Catalog web part executes a new validation to determine if there is enough 'quantity available' for that particular product. MX then checks if 'Allow Backorder' = yes or no:<br><br>• If Qty available < 1 and Allow Backorders = no, then the message "Item will be back ordered" is displayed, and the selected product is not added to the cart.<br>• if Qty available < 1 and Allow Backorders = yes, then the selected product is added to the cart without further notification on the Product Catalog. The Shopping Cart displays "Back Order (1 item)."<br>• If Qty available >= 0, then there is no validation.<br>• If the user has changed Qty ordered to a value > 1, the Shopping Cart performs the partial backorder calculation to determine how many items can be shipped, based on the Qty available logic in UX. The Shopping Cart backorder message will indicate how many items in the order must be backordered. |
| **Shopping Cart – Backorder Calculation Before Processing Cart**<br><br>For Out of Stock products, display Backorder Notification or Prevent Purchase Prior to Processing Payment. | The MX Shopping Cart will now display the same backorder notifications BEFORE processing the cart as the Purchase Confirmation page does AFTER processing. By notifying the user of backorder status of a product before the purchase, the user will have what is needed to make an informed decision prior to processing the transaction.<br><br>The shopping cart uses backorder calculation and notification at the following points:<br><br>• Cart Items: The Shopping Cart will display the text "This product will be backordered" for each Product Sales cart detail item if the backorder flag = yes.<br>• Payment Authorization: The cart total is recalculated before payment authorization to remove charges for backordered items from the cart total submitted to the payment gateway.<br>• Purchase Confirmation: The Shopping Cart processes the product sales as it already does in MX, invoking UX back-order logic at the time of invoice creation, so the purchase confirmation page correctly reflects the status of the order in the recorded invoice. If any items are backordered, the purchase confirmation displays the quantity backordered, so partial backorders are clearly identified. |

## Shopping Cart Module

| Name | Description |
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| **AutoPay – Save Multiple Credit Cards**<br>**UX 365 Exclusive**<br>***(BluePay by CardConnect Only)***<br>Save and manage multiple credit cards. | The MX AutoPay Sign-Up web part allows the user to save a credit card for automatic payments of membership renewal invoices, contributions, and other AutoPay modules. Until now, MX would only allow a user to save one card even though multiple cards could be saved in the back office database. If a user wanted to add another card, they would need to remove the existing card in order to do so. This made it impossible for the user to designate one card for AutoPay membership renewals and a different card for other AutoPay modules.<br>Now, the AutoPay Sign-Up web part allows the user to add multiple credit cards, and the user can designate different cards for different AutoPay modules.<br>This functionality is only available for MX 365/ UX 365 systems where the Payment Gateway is BluePay by CardConnect.<br>A grid view of all saved active credit cards allows the user to select AutoPay modules for all cards at a glance. New validation ensures that only one card can be authorized for any one module. This is necessary because when AutoPay is run in UX for membership invoices, for example, it cannot make a choice between cards, so there must be only one card that is authorized for paying this type of invoice.<br>Saved credit cards can be identified either as belonging to the contact or to the contact's parent company, so different cards can be applied to invoices where the contact is the BillTo customer, or to invoices where their parent company is the BillTo customer. This distinction is important because AutoPay processes rely on the invoice BillTo Customer.<br>Additionally, credit cards can be saved without designation to any module for automatic payment, only for use in paying for future online purchases. Note that if a user saves the credit card without any module selected, then the card is not applicable to AutoPay, but the user is free to re-use the card at the point of paying a shopping cart, just as they can re-use a card that has also been authorized for automatic payments by the association.<br>As an alternative to saving a card using the AutoPay Sign-Up web part, the user can save a card in the Shopping Cart. After entering a new credit card in the Shopping Cart, a checkbox allows the user to save this card for future purchases. If the user elects to save the card, they are then asked if they want to authorize the organization to use the card for AutoPay. The Shopping Cart can be configured to select a particular module for new authorizations, which can then be overridden in the grid view of the AutoPay web part. |

| Name | Description |
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| **Shopping Cart – Apply Saved Credit Card as Payment for Cart**<br><br>**UX 365 Exclusive**<br><br>***(BluePay by CardConnect Only)***<br><br>Apply payment from saved credit card. | A user can save a credit card either by entering it in the AutoPay Sign-Up web part or by selecting the option to save it after entering card information into the shopping cart as payment for a current purchase. Any credit card that is saved can now be applied as payment in the Shopping Cart for a current purchase. This functionality is only available for MX 365/ UX 365 systems where the Payment Gateway is BluePay by CardConnect.<br><br>When a user reaches the payment form of the shopping cart checkout process, if they have any saved credit card(s), a radio button list of those cards is displayed so the user can select one for immediate authorization, without having to re-enter the credit card information. If there is only one saved card, it is automatically pre-selected, so the user just needs to click the "Process Order" button to submit the payment. The Shopping Cart immediately displays the payment confirmation if the authorization is successful.<br><br>Alternatively, the user can click a button to enter new credit card information. If there are no credit cards on file for the user, they are prompted only to enter information on a new credit card as in previous versions. After entering a new credit card, a checkbox allows the user to save this card for future purchases. If the user elects to save the card, they are then asked if they want to authorize the organization to use the card for AutoPay. The Shopping Cart can be configured to select a particular module for new authorizations, which can be overridden using the AutoPay Sign-Up web part.<br><br>The radio button list of saved payment demographics records displays only records where contact/account = BillTo customerID, and where the credit card type has the same accounting company and currency as the shopping cart.<br><br>The list of selectable credit cards omits any card that was previously declined during authorization. Saved cards that were declined at any point, either via UX or MX, are flagged in UX as "Credit Card Has Problem" and are never offered as valid payment in the shopping Cart.<br><br>If the user selects a saved card for application to a current purchase and the BluePay payment gateway rejects it for any reason, the Shopping Cart updates the card's Payment Demographic record with "Credit Card Has Problem" = Yes, and updates the Payment Demographic record "Problem Description" field with the Error Code and Error Message returned from BluePay. The user receives the standard authorization error message and has to select or enter a different card or payment method.<br><br>As of MX 365, all web parts in the Shopping Cart module share the same payment form. As a result, the same ability to pay using a saved credit card is available in the Pay Invoices and Pay Installments web parts as well as in the main Shopping Cart web part. |

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<tr><th>Name</th><th>Description</th></tr>
<tr><td>Pay Invoices – Pay an Invoice from Email Link without Signing In.<br><br>Pay one invoice from a ‘Pay Now’ email Link without requiring user to login.</td><td>There are several scenarios where a person needs the ability to pay a specific identified invoice, regardless of who the BillTo Customer was for that invoice. MX 365 now supports this functionality, allowing a user to click a link that navigates directly to a particular invoice and pay it immediately, without having to login or select from a filtered list of their own outstanding invoices.<br><br>The easiest way to empower a user to pay a specific invoice online is to use a workflow or mail merge to send a hyperlink via email to a contact. The URL should be directed to one of two pages: Pay Specific Invoice or View Invoice. Create a new page called ‘Pay Specific Invoice’, and set ‘Display in Menu’ = No, so it is accessible only from an external hyperlink. This new page will have only the Pay Invoices web part on it. No special configuration is needed for this web part except to change the Title to make clear that it will only be used to pay one invoice.<br><br>What is new in MX 365 is the following:<ul><li>The Pay Invoices web part can now be configured to be viewed by an anonymous user so the user does not need to login. Be sure to set DNN permissions on the Pay Specific Invoice page and View Invoice Page so that Unauthenticated users can access these pages.</li><li>If the URL contains a parameter for invoiceid, the list on the Pay Invoices page will be limited to that one invoice, and the payment amount will automatically be set at the outstanding balance of that one invoice. This is why no special configuration is needed for this web part to support payment of one invoice.</li><li>The identified invoice is displayed regardless of the filters applied in the configuration settings of the ‘Pay Invoices’ web part. So the user can pay their company’s invoice on this page even if the web part is configured to show only contact invoices, and they can pay a membership invoice even if the web part is configured for invoices in a different accounting company.</li><li>On the ‘View Invoice’ page, an instance of MX Find is configured to display invoice data in a dedicated invoice template, InvoiceDetails.ascx. A new button has been added to this template at the bottom of the page, labeled ‘Pay Balance’. This button has been added so that the email hyperlink can be directed to view invoice details first, so the user can decide to apply payment after reviewing. Clicking this button uses the MX Find Navigation URL setting to take the user to the Pay Specific Invoice page with its invoiceid appended.</li></ul></td></tr>
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| Name | Description |
|---|---|
| **Pay Invoices – Send Email Receipt**<br><br>Send "Payment Confirmation" after User applies Payment to Invoice(s). | Previously, it was not possible to send a payment confirmation email to a user after using the Pay Invoices / Pay Installments web part, because the UX workflow that generates purchase confirmation emails was not triggered by payment to an existing invoice as it is when the MX Shopping Cart generates the invoice.<br><br>Now, when MX processes a payment, a Payment confirmation email is automatically sent to the signed in user via MX without going through a UX workflow. The body of the email that gets sent via these web parts is not the same as the regular purchase confirmation emails, because what MX sends to the user is the same information that is displayed in the Pay Invoices / Installments confirmation page, which is invoice balance(s) and payment amount. By contrast, the Purchase Confirmation email contains the invoice details. |
| **Shopping Cart – Invoice Naming Consistency**<br><br>Make Invoice Header Naming convention consistent between MX and UX. | In UX, the Invoice Name is automatically assigned based on the main module of the Invoice transactions. For example, a Membership Invoice has an Invoice Name that identifies the module as 'Membership' and the Primary Benefit. MX uses the same logic to name invoices created through the Shopping Cart.<br><br>An earlier release of MX removed discrepancies between the naming conventions used by MX and UX. A minor change has been made to the syntax used by MX to ensure consistency. The change is the same for all affected modules - The space on both sides of the dash (-) separating Module Name from Product has been removed, as follows:<br><br>1. Meeting Registration: "Meeting-<Meeting Name>"<br>2. New Memberships/Subscription: "<Benefit Name>-New"<br>3. Rejoined Membership/Subscription: "<Benefit Name-Rejoin" |

## Security (SSO)

| Name | Description |
| --- | --- |
| **NEW Web Part: 'SAML Redirector' for SAML SSO**<br><br>SAML 2.0 is now supported as a standard SSO protocol. | Protech clients can now choose between two SSO methods with related websites. In addition to the standard SSO approach, where MX shares a user's identity via token passing/cookie, Protech now also supports ***the SAML 2.0. SSO method for outgoing SSO***. SAML 2.0 (Security Assertion Markup Language) is a web-based single sign-on (SSO) method of authenticating users; it uses the XML standard for exchanging user data between an Identity Provider (Protech MX) and Service Provider (an external site).<br><br>When using the SAML method for SSO, the service provider redirects the unidentified user to the identity provider (Protech MX) and asks for a response as to whether or not this user is a valid member of the user database. The identity provider's response is considered an assertion of the user's identity.<br><br>MX has a configurable web part, "SAML Redirector", that identifies the URLs, encryption options and communications metadata that support the SAML handshake and trust needed for SSO integration between MX and an external service provider.<br><br>Metadata is exchanged by the service provider and Protech. This metadata includes all of the technical attributes needed for MX to interpret the Service Provider's SAML request, including the x509 public certificate that is used to sign the SAML request. The external site must also provide Protech MX with their public key so that Protech MX can verify SAML requests as signed and authorized. In addition, Protech must obtain all the attributes, including site URL, company account name, security codes, etc., that need to be included in the SAML response. In return, Protech needs to provide similar metadata about Protech URLS and passcodes.<br><br>The SAML integration process works as follows:<br>1. User navigates to a related external website that is integrated with MX via SAML SSO. They attempt to perform an action that is available only to signed in users.<br>2. Service provider sends an HTTP POST message with a signed SAML Request (signed with the Service Provider's private certificate key) to the predefined SSO URL that includes the applicable Protech MX endpoints and security codes.<br>3. Once the SAML Request is sent to Protech MX, the SAML Redirector web part will authenticate the request using the public key configured in Portal Settings.<br>4. If the user is not already logged into the MX site, the redirector will take the user to the MX Sign in page and then prepare a response for the requester. If the authentication fails, an appropriate error message will be sent back to the Service Provider).<br>5. If successful, Protech MX sends the signed SAML Response (signed with Protech MX's private key) to the Service Provider.<br>6. The service provider will use Protech MX's public key to verify the response as properly signed from Protech.<br>7. The SAML Response will contain the Member Id and other user attributes as specified in the web part configuration. At a minimum, the SAML XML for each user will provide the following attributes: |

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|---|---|
| | a. Member ID (pa_contactnumber)<br>b. first name<br>c. last name<br>d. email<br>e. member status (pa_member = 1)<br>Additional custom field data can also be sent alongside the default fieldset, without requiring customization.<br>8. If successful, the user will be logged into the Service Provider's site.<br><br>Before MX 365, each client partner who wanted to utilize this SSO method had to go through the in-depth discovery and requirements gathering process that is necessary for a custom deliverable, and Protech developers had to write code to support unique integration requirements.<br><br>Now, with the standardization provided by the SAML Redirector web part, Protech only needs to review a brief checklist with the partner in order to configure the SAML Redirector web part according to the metadata provided to Protech by each service provider. The coding that enables the two systems to exchange is generated automatically by the web part.<br><br>If a client has multiple SSO partners, each instance of the SAML Redirector will be configured uniquely, on its own page, so Protech can implement each partner's metadata specifications. For this reason, the MX team at Protech will need to be notified whenever a new third party is added to the SAML SSO domain. |

## Updates

| Name | Description |
|---|---|
| **Styling – Bootstrap Version 4.5**<br><br>MX Styling – Upgraded Bootstrap to Version 4.5.0 in both MX Components and MX R2GO DNN Theme. | Bootstrap has been upgraded to Version 4.5.0 in both MX environments and MX R2GO DNN Theme. |

## NOTABLE BUG FIXES

### Global and Customer Modules

| Name | Description |
|---|---|
| **Account Edit Mode Permissions**<br><br>Always enforce Edit Mode Security Roles. | It was reported that the Account – Company Information and Customer – Addresses web parts were not enforcing Edit Mode permissions as defined in the Edit Mode → General - ‘Edit Mode Access’ setting of the Web Part Configuration form. Even when Edit mode was configured so that only Administrators should have permission to edit the web part data, any authenticated user was still able to edit it. In the case of the Customer – Addresses web part, the unauthorized user could both edit and remove a record.<br><br>Changes have been made so that both the Account – Company Information and Customer – Addresses web parts always enforce Edit Mode privileges. |
| **MX Find – Search using an Apostrophe**<br><br>Search containing an Apostrophe now returns results. | MX Find search fields will now work as expected when the user enters an apostrophe. Previously, if the user entered a string such as "O'Brien", into a search field the apostrophe prevented the MX Find web part from returning any results. This change brings MX into alignment with UX where an apostrophe is correctly recognized in a search. |

## Meetings and Exhibit Modules

| Name | Description |
|---|---|
| **MX Form in the context of Group Registration**<br><br>Web Part again recognizes ShoppingCartDetailId as a valid Registrant. | In a group registration, after selecting registrants and assigning Registrations to those registrants, the user saves the page containing the Group – Select Registrations web part. At this time, a Shopping Cart is populated and the user is directed to the Registration Summary – Group web part. From this point forward all edits are done one registrant at a time on the Group Details page using 'ShoppingCartDetailId' to identify the registrant.<br><br>An issue was reported where after clicking 'Edit' from within the Registration Summary – Group web part to edit a single registrant, when the Group Details page loaded, an instance of MX Form configured as Contact Type = 'Current Registrant (Meeting Registration Only)' incorrectly displayed data for the signed in user instead of for the selected registrant.<br><br>Changes have been made so that now MX Form will recognize both 'AppID' and 'ShoppingCartDetailId' as a valid way of identifying Meeting Registrant. This ensures that when Contact Type = 'Current Registrant (Meeting Registration Only)' data for the selected registrant is correctly displayed regardless of the method in which the user accessed the page. |
| **Registration Required Questions**<br><br>UDF Required fields Retain Red Asterisks when user selects a different Registration. | In a Single Meeting Registration, the Single – Select Registrations web part is often on the same page as the Registration Questions web part. When a page containing both of these web parts first loaded, all required questions were correctly flagged with a red asterisk. However, if the user selected a different registration, the automatic page refresh would hide all red asterisks for the required fields. The fields were still required, but the user had no idea until a validation message trapped the missing fields.<br><br>Changes have been made so that a red asterisk will always display for required questions regardless of how many times the user selects a different registration. |

### Shopping Cart Module

| Name | Description |
|---|---|
| **Shopping Cart – Account BillTo Validation**<br><br>Prevent Processing of Cart if Account Cart Customer/BillTo No longer matches the Current Contact Parent Company. | Infrequently, a user will start an Account Membership Application and then move to a different Company before that Membership is processed in MX. When this occurs, processing the cart would provide Membership Benefits to the user's previous Company. Until now, MX did not validate that the Customer Name/BillTo in the Shopping Cart still matched the user's Parent Company so the user could end up applying payment in the cart for the wrong Company Membership.<br><br>To prevent this from occurring, MX now cancels any MX Membership Application record(s) for an Account Membership where a contact has changed their Parent Company with an existing Active MX Tracking record and/or Shopping Cart. If there is a mismatch between the MX Membership Application Account and the Contact.ParentCustomer, then the 'MX Nightly System Job' will cancel the active MX Membership Application and MX Shopping Cart records that meet the cancellation criteria.<br><br>In the unlikely event that the MX Nightly System Job fails to cancel mismatched MX Tracking or Shopping Cart records, new validation logic in the Shopping Cart will alert the user and prevent them from processing the cart. When this occurs, the user can either delete the Account Membership Detail line item(s) from the Shopping Cart (This keeps the cart active and allows the user to purchase any other items in the cart that are not directly related to the Account Membership) or clear the cart completely and start the Company Membership over again with the new Company. |

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