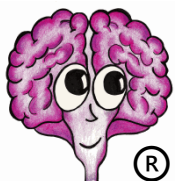


DocuBrain® TechDoc Release Notes



A DocuBrain® Product

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By Prevo Technologies, Inc.

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DocuBrain® TechDoc 10.1.3 Release Notes

These release notes document the changes from TechDoc 10 to TechDoc 10.1.3. If you are upgrading from TechDoc 9, 9.1, or 9.2 to TechDoc 10 and then to TechDoc 10.1.3, you should also consult the release notes for TechDoc 10 to see what changes were introduced as part of that release as well.

Important notes: TechDoc 10 dropped support for Windows Server 2008/2008 R2 and SQL Server 2008/2008 R2 since Microsoft extended support has ended for these products. In TechDoc 10.1, the Microsoft JDBC driver has been updated and due to Microsoft restrictions, TechDoc 10.1 will not work with SQL Server 2008/2008 R2 at all.

If you are currently using either Microsoft 2008/2008 R2 product, please update to a newer version before installing or upgrading to TechDoc 10.1. TechDoc 10.1 supports Windows Server 2012 - 2019 and SQL Server 2012 - 2019.

Changes from TechDoc 10.1 to the patch versions of TechDoc 10.1 are marked with the superscripted version number surrounded with square brackets; like this ^[10.1.1].

Security-Related Issues

DM-592: Add Escaping of Usernames in Remote User Logic

During a code review, it was noticed that usernames were not being escaped in the update logic for Remote Users. While this did not cause a problem with current data input restrictions, TechDoc never relies on that. Therefore, the usernames are now escaped to prevent any possible problem in the future should the input restrictions be changed.

DM-813: Update the DM SAML Authenticator XML Security Library and Add Metadata URL Support

The DM's XML security library used for the signing and encryption of XML has been updated to support newer methods. Support was also added for an IDP metadata URL. When this URL is set on a SAML authenticator, it will check the URL for an updated metadata file when the authenticator starts, authenticator settings are updated, or a TechDoc admin manually requests that the authenticator settings be refreshed via the side menu on the authenticator.

DM-828: Update DM's Java to Latest Security Baseline 8u301 ^[10.1.2]

Due to several security weaknesses prior to 8u301, TechDoc 10.1.2's internal Java has been updated to 8u302, which includes the latest 8u301 security fixes including removal of weak root certificates, upgraded PKCS12 encryption algorithms, improved TLS negotiation, IPv4 address validation enforcement, and PBES2 encoding errors.

DM-831: Fix Issue with Some Newer Privileges Not Working as Default Privileges ^[10.1.3]

Certain newer privileges have large internal values that could mess up default user privileges when creating a user. This was fixed in TechDoc 10.1.3.

DM-832: Fix Several Security and Quality Issues Identified by SpotBugs ^[10.1.3]

TechDoc was analyzed using SpotBugs, a Java static analysis program. Several security issues were identified where values placed in SQL statements were not properly escaped. Multiple quality issues were identified which could result in unexpected null pointer exceptions and unclosed resources. In addition, several minor performance issues were identified.

SM-169: Update the SM SAML Authenticator XML Security Library and Add Metadata URL Support

The SM's XML security library used for the signing and encryption of XML has been updated to support newer methods. Support was also added for an IDP metadata URL. When this URL is set on a SAML authenticator, it will check the URL for an updated metadata file when the authenticator starts, authenticator settings are updated, or a TechDoc admin manually requests that the authenticator settings be refreshed via the side menu on the authenticator.

SM-173: Update SM's Java to Latest Security Baseline 8u301 ^[10.1.2]

Due to several security weaknesses prior to 8u301, TechDoc 10.1.2's internal Java has been updated to 8u302, which includes the latest 8u301 security fixes including removal of weak root certificates, upgraded PKCS12 encryption algorithms, improved TLS negotiation, IPv4 address validation enforcement, and PBES2 encoding errors.

Problems Resolved

DM-605: Cannot Lower Read on Doc Category if a Document is Missing a Required Keyword

An issue was encountered where a Doc Category's Highest Read setting could not be lowered because one or more documents were affected and at least one of the documents was missing a keyword required by their Doc Type. Modify Doc Category has been updated so that it no longer requires Keyword verification.

DM-782: Workflow Process Containing SOAP Web Service Call Fails to Deploy

Processes could not be deployed or redeployed when they contain web service calls under various conditions. As a part of DM-799, nearly all SOAP related coded was redesigned and this issue was eliminated in the process.

DM-783: No Error When Creating Workflow Deployment and Workflow Engine is Stopped

When the Workflow Engine background task was stopped and someone attempted to create a new workflow deployment from a browser or the Workflow Editor, it wouldn't be created and it wouldn't tell them why. All TechDoc commands that depend on the Workflow Engine running now generate an appropriate error when that command cannot be completed because the Workflow Engine is currently stopped.

DM-815: Associate Access Command Not Storing Remote Users for Rest Clients

Associate Access in the TechDoc client was not saving remote users. It turned out to be a server-side issue and could not be addressed by a client update. The REST API used by the TechDoc client has been updated and now properly saves any Remote Users specified on Associate Access.

DM-816: External App Credentials Ignores User Time Inputs

External App Credentials ignored the user's time inputs on the blocked until and expiration dates. The time portion was always being interpreted as if it were set to "00:00:00". This has been corrected.

DM-817: Clicking Previous Button on Modify RMA Record Causes Issue with Record Set

When modifying an RMA Record, if the previous button was clicked and the initial screen is shown, the record set field turns to a drop down (as it would on the create RMA record screen) instead of staying static as it should. This could cause errors during the modification process if the user attempted to change it. This has been corrected and the field now stays static during a modify as it should.

DM-829: New HTML Report Styles Missing from TechDoc 10.1 Installer ^[10.1.2]

The new CSS report styles for HTML reports were mistakenly left out of 10.1 and 10.1.1 installers. They have been added as part of the 10.1.2 installer update.

Changes, Improvements, and New Features

DM-770: Address Remaining Issues Found in DM 508 Compliance Testing

Just prior to the release of TechDoc 10, we received a 508-compliance report detailing several issues that needed to be addressed. The largest issues were addressed as part of TechDoc 10. Due to scheduling constraints, the remaining issues were addressed as part of the TechDoc 10.1 release. Here are highlights of what were addressed as part of this release:

- The DM has been fully migrated from HTML 4.01 transitional to HTML 5.
- Table usage and structuring across all servlets has been adjust wherever possible to better support screen readers per (WCAG 2.0 A 1.3.1 Section 508 (2017) A 1.3.1) and (WCAG 2.0 A F91 Section 508 (2017) A F91).
- Page titles were adjusted to create unique titles everywhere possible per (WCAG 2.0 A F25 Section 508 (2017) A F25).
- All form-based input servlets such as create/modify servlets were adjusted so that all fields have corresponding HTML labels per (WCAG 2.0 A F68 Section 508 (2017) A F68).
- Table nesting across all servlets were modified and removed where possible per (WCAG 2.0 A F49 Section 508 (2017) A F49).
- All older deprecated HTML attributes were removed and converted to using newer CSS styling.

- There were findings for the usage of various script tags. All instances have been removed or corrected for full HTML 5 compliance.

DM-781: Allow TechDoc DM to Be Behind a Reverse Proxy

The TechDoc DM now properly support being behind a reverse proxy. This feature also supports other non-passive network security devices, load balancers, etc. The main issue is that when a reverse proxy is in between a client and TechDoc, the IP address of the request will appear to originate from the reverse proxy and not the client. This can disrupt various IP address-based features and security measures.

Unfortunately, there is an inconsistent adherence to standards when it comes to reverse proxy support. As such, TechDoc is configurable on a device-by-device basis to set what HTTP headers to look for, etc.

DM-784: Add Mass Modify Doc Mail Functionality

A Mass Modify Doc Mail servlet has been added that works similar to the other mass operations. It allows adding/removing one or more groups, users, or remote email for notification or distribution, or adding/removing one or more groups or users for commenting.

It gracefully handles documents that would cause collisions or errors. For example... When adding an entry, it detects and does not try to add an entry that is already there. When removing an entry, it detects and does not complain if the entry doesn't exist.

DM-787: Create Purge Form Submissions Servlet

A Purge Form Submissions servlet has been added so submissions can be deleted in bulk. Due to the nature of form submissions and how they are created, they can build up over time and it's quite tedious deleting them individually.

DM-788: Add Created Status to Form Submission and Confirmation on Create

Previously, a single click of the side menu link triggered the creation of a form submission. An additional step needed to be added so that submissions aren't created accidentally or by automated testing software.

Additionally, a new status called Created was added. This new status is the initial status of a submission. Once the user has begun a submission and saved at least one field, the submission will be promoted to incomplete. The incomplete status used to encompass both of these states and really needed to be split into two for clarity.

DM-790: Add JavaScript-Assisted Folder Selection for Multiple Servlets

The Mass Document, Mass Folder, and RMA Quick Report servlets all use a static method for entering a folder path. Now the folder path input is JavaScript-assisted and helps provide autocompletion as the folder path is entered by the user.

DM-792: Add Verify Integrity for Forms, Form Submissions, and Form Submission Entries

Verify Integrity has been updated for integrity checking of the Forms, Form Submission, and Form Submission Entry tables. It should have been added at the time that forms were implemented.

DM-794: Add Workflow File Support

File support has been added to Workflow. This allows Workflow's to send or receive files. Files are automatically cleaned up after processes terminate. Files that should be retained after process termination must be saved to a new document, added as a generation or attachment, or sent to another workflow process or remote service before the process terminates.

DM-795: Update TechDoc DM to the Latest Tomcat

The TechDoc DM has been updated to the latest Tomcat and ISAPI connector for improved performance and improved Windows Server 2019 support.

DM-796: Update DM Guides Impacted By 508 Changes

The reference sections of multiple DM guides rely on HTML help files to build the content for those sections. Unfortunately, the 508 changes had a big impact on that conversion process and needed to be updated to support those differences.

DM-797: Add Virtual Disk Space Column to the Document Report

A disk space column has been added to the Document Report. This virtual column shows the current disk space used by all files related to the document, which includes Generation files, Attachment files, Discussion files, and Comment files. This allows the customer to quickly identify how much disk space is taken up by the documents on a report.

DM-798: Add Totals to Reports

Reports now provides support for totals on fields that make sense to have them. For instance, a new virtual field that supports a Document's total file size was added in DM-797. It is very helpful for the reports to optionally show the total size for the selected documents.

DM-799: Improve Workflow Web Service Capabilities

While working on DM-782 (issues when deploying processes containing web services), it was very apparent that web services needed a complete makeover. The Activiti workflow engine that TechDoc's engine is based on has a very rudimentary implementation of SOAP. It didn't properly support the SOAP's document-based message format and it only supported parsing a single schema and document level. The TechDoc engine now fully supports SOAP's document-based message format with multiple schemes, which enables complex and custom complex data types. The SOAP performance has also been increased by ten times.

DM-800: TechDoc SOAP Services Need to Add the Streaming Attachment Annotation

In implementing the new SOAP service (TechDocExampleService) for the testing and redesign of Workflow's SOAP engine, the Streaming Attachment annotation was added to all applicable SOAP services. This annotation is responsible for making sure all incoming attachments are stored to disk that are over a given size threshold. TechDoc already had MTOM implemented but this annotation ensures that all attachments are fully streaming in SOAP.

DM-801: Add a Mass Document Quick Report

A Mass Document Quick Report has been added. The idea is that you perform the initial search that selects all the documents that would be affected by another Mass Document operation. Then when you go to the next screen, you get the option to download a CSV file containing the

documents that would have been affected had this been an actual mass modification command.

A customer wanted a TechDoc Admin to be able to create a quick report of what documents would be affected by the specified criteria so that the requesting user can approve the list of documents before the TechDoc Admin performs the real Mass Document operation on the documents. This quick report is useful for pre-reporting on the following operations: Mass Modify Documents, Mass Modify Document Access, Mass Modify Document Mail, Mass Cancel Documents, and Mass Delete Documents.

DM-802: Add Styles to HTML Reports

Styles for HTML reports has been added. There are many predefined styles but system admins can also add additional styles for their own users to use.

To make things even more flexible when a style is chosen, the report generator looks for a matching JavaScript file that will also be merged into the report if it exists. JavaScript gives the report style designer the ability to add and remove HTML elements, add dynamic content, etc.

DM-803: Create JavaScript-based Folder Path Search Widget

A JavaScript widget has been created for Folder Path inputs like the Document Number widget that was created for adding documents to projects. This new widget provides auto-completion of a folder path as the user is typing, making it much easier to enter a proper folder path when one is needed. This widget was used as part of the work done in DM-790.

DM-804: Add Folder Path to Advanced Document Search

The ability to search on the parent folder and optionally include subfolders has been added to the Advanced Document search.

DM-805: Apply Report Improvements to RMA Quick Reports

Reports has been updated to support styles and outputting report totals. RMA Quick Reports have also been updated to add styles as well and change the report totaling to match how reports provides totaling.

DM-806: Add Parent Folder as Advanced Document Search Criteria

The parent folder added in DM-804 has been updated to utilize the new JavaScript widget implemented as part of Jira DM-803.

DM-807: Add Deferred Process Start Mechanism with Throttling to the Workflow Engine

A deferred start mechanism on the workflow engine has been added so it can throttle the number of running processes on the engine. This feature gives system admins the ability to scale the foot print of workflow in relation to the resources they are giving a Document Manager instance and it allows processes to be queued for future execution even when the workflow engine is currently stopped.

DM-808: Update System Properties if Necessary, When Group Names Change

The system properties AlertGroup, DocDistributionGroup, DocNotificationGroup, FolderNotificationGroup, and MetricNotificationGroup can all be optionally set to a Group Name. The value is saved as a name and not an ID. This means that renaming a group that is used by one of these properties would break that functionality until the System Property was manually adjusted.

Now Modify Group automatically updates these system properties when the group they refer to is renamed. In addition, a history record is created to document why the system property/properties was/were changed.

DM-809: Change Workflow Management into a Customizable Dashboard

Workflow Management has been changed to use a customizable dashboard like My Work and Forms. Multiple workflow widgets were created to provide all the information that the original Workflow Management screen did. Additional workflow widgets can now be easily created as requested by customers.

DM-810: Upgrade Dashboard Charting to Chart.js Version 2

Charts.js has been upgraded to version 2 to get the mixed chart feature needed for a Workflow widget. This upgrade was attempted under DM-700 shortly after version 2 was released but it was very unstable. Quite a few minor releases have come out since then and it is stable now.

DM-811: Add a Mass Folder Quick Report

A Mass Folder Quick Report has been created. The idea is that you perform the initial search that selects all the folders that would be affected. Then when you go to the next screen, you get the option to download a CSV file containing the folders that would have been affected had this been an actual modification command.

A customer wanted a TechDoc Admin to be able to create a quick report of what folders would be affected by the specified criteria so that the requesting user can approve the list of folders before the TechDoc Admin performs the real Mass Folder operation on the folders. This quick report is useful for pre-reporting on the following operation: Mass Modify Folders.

DM-814: Add Document Lookups on Mass Modify Document

Mass Modify Document has four inputs that accept document numbers for associating access, commenters, distribution, and/or notification from the specified document to the currently selected documents. These four inputs have been upgraded to the document number lookup fields that make data entry much easier.

DM-818: Add Virtual Commenters, Distribution, and Notification Columns to Documents/Folders/Projects on Reports

Virtual Commenters, Distribution, and Notification columns have been added to Documents on Reports that shows the people associated to the document for that purpose. The columns contain all the groups, users, remote users, and remote emails associated to the document for that purpose so that it provides all the information similar to what the Show Associations servlet does.

The virtual Notification column has also been added to Folders and Projects. Neither of them supports associating Commenters or Distribution to them.

DM-819: Add Ability to See All Items Associated to a Remote Email or Remote User

Show Remote Email and Show Remote User only showed the first 50 documents with no way to see the rest of them. A link has been added when the limit is hit, so that if the user clicks it, all documents are shown.

The initial limit has been raised to 100 documents. The "show all" link also applies to other items that can be limited like groups, reviews, etc.

DM-821: Add System Property to Limit Which Types of Groups Non-Admins Can Create

A System Property has been added that limits the types of groups that a non-Admin can create. By default, the property is initially set to allow the pre-TechDoc 10.1 non-Admin limits (non-Admins can create any type of group except External groups). After upgrading, a system admin can change which types are allowed.

DM-823: Improve Fetching and Voting When Remotely Authenticated User Maps to More Than One TechDoc Account

An issue was found when someone was trying to vote on a review while logged in with a TechDoc account that remotely authenticated to more than one TechDoc account. It was determined that fetching and voting will only work with the currently selected TechDoc account. TechDoc will now use any of those eligible TechDoc accounts for the permission to fetch or vote.

DM-824: Try to Prevent Autofill on Username and Password Fields on the Vote Screen

Most browsers have gotten very aggressive about wanting to autofill username and password fields on screens. While this might be fine for some things, it can cause problems with the Review Vote screen. If the browser autofills the username and password, the Vote screen will try to process that as the user who want to cast a vote. TechDoc now tries to prevent autofill from occurring on these fields so that Vote will only attempt to use the username/password if the user actually fills them in.

SM-159: Address Remaining Issues Found in SM 508 Compliance Testing

Just prior to the release of TechDoc 10, we received a 508-compliance report detailing several issues that needed to be addressed. The largest issues were addressed as part of TechDoc 10. Due to scheduling constraints, the remaining issues were addressed as part of the TechDoc 10.1 release. Here are highlights of what were addressed as part of this release:

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- Page titles were adjusted to create unique titles everywhere possible per (WCAG 2.0 A F25 Section 508 (2017) A F25).
- All form-based input servlets such as create/modify servlets were adjusted so that all fields have corresponding HTML labels per (WCAG 2.0 A F68 Section 508 (2017) A F68).
- Table nesting across all servlets were modified and removed where possible per (WCAG 2.0 A F49 Section 508 (2017) A F49).
- All older deprecated HTML attributes were removed and converted to using newer CSS styling.
- There were findings for the usage of various script tags. All instances have been removed or corrected for full HTML 5 compliance.

SM-165: Allow TechDoc SM to Be Behind a Reverse Proxy

The TechDoc SM now properly support being behind a reverse proxy. This feature also supports other non-passive network security devices, load balancers, etc. The main issue is that when a reverse proxy is in between a client and TechDoc, the IP address of the request will appear to originate from the reverse proxy and not the client. This can disrupt various IP address-based features and security measures.

Unfortunately, there is an inconsistent adherence to standards when it comes to reverse proxy support. As such, TechDoc is configurable on a device-by-device basis to set what HTTP headers to look for, etc.

SM-166: Update TechDoc SM to the Latest Tomcat

The TechDoc SM has been updated to the latest Tomcat and ISAPI connector for improved performance and improved Windows Server 2019 support.

SM-167: Update SM Guides Impacted By 508 Changes

The reference section of the SM Admin guide relies on HTML help files to build the content for that section. Unfortunately, the 508 changes had a big impact on that conversion process and needed to be updated to support those differences.

SM-168: Increase IDs used in SM to Prepare for More Than 2 Billion Documents

All table IDs in the DM and SM are currently signed 32-bit numbers, which limits the total number of documents, generations, etc. to a little over 2

billion. The IDs in the SM have been updated to signed 64-bit numbers in order to increase the limit to 9 quintillion IDs per table.

There will still need to be more work done before an SM can handle more than 2 billion documents, but this is the first major step towards that goal. In another release, the search engine itself will need to be reviewed for potential solutions. TechDoc currently uses Lucene which is hard limited to a total of 2 billion documents per index.

SM-170: Remove file name from Fetch Latest Rev Link on Document Details Search Result

The file name has been removed from the Fetch Latest Rev URL shown on the Search Details screen for a document. For example, the link for a file named test.pdf might look like this:

```
https://hostname/servlet/sm.web.Fetch/test.pdf?rhid=1000&did=1000&type=released
```

After this change, the link would look like this:

```
https://hostname/servlet/sm.web.Fetch?rhid=1000&did=1000&type=released
```

The main reason for the change is the link is meant to be an easy way for users to copy that URL and place it on other web sites as a permalink to the document. With the file name in the URL, most browsers use that file name as the name to save the file to when fetching the file.

The problem is that over time, the document maintainer might change the name of the document or even the type of document (.xlsx instead of .docx) and that would cause the permalink to still suggest the old (but now wrong) file name. If no file name is present in the URL when an end-user clicks on it, the SM will realize that and redirect the end-user to a new version of the fetch URL that includes the current and correct file name so that the browser is always suggesting to save it to the proper file name.

SM-171: Improve Doc Number Searching When Users Use Spaces ^[10.1.1]

We received input that some users were having trouble finding some documents having a space in a Doc Number when they did a search using the Doc Number search field. The Doc Number field is the “primary key” in the index and with the search engine TechDoc uses, you can’t have spaces in the primary key.

Some end users think of a document having the number KNPR 8700.2 not KNPR_8700.2. Of course, we can't guarantee what the original creator of the TechDoc document will do because of the no space rule. For KNPR 8700.2, they might just as likely have used KNPR-8700.2 or KNPR8700.2 instead of KNPR_8700.2.

The search engine now replaces one or more spaces in a doc number search with an asterisk so that end users experiencing the reported problem should see the document that they are looking for in the results now.