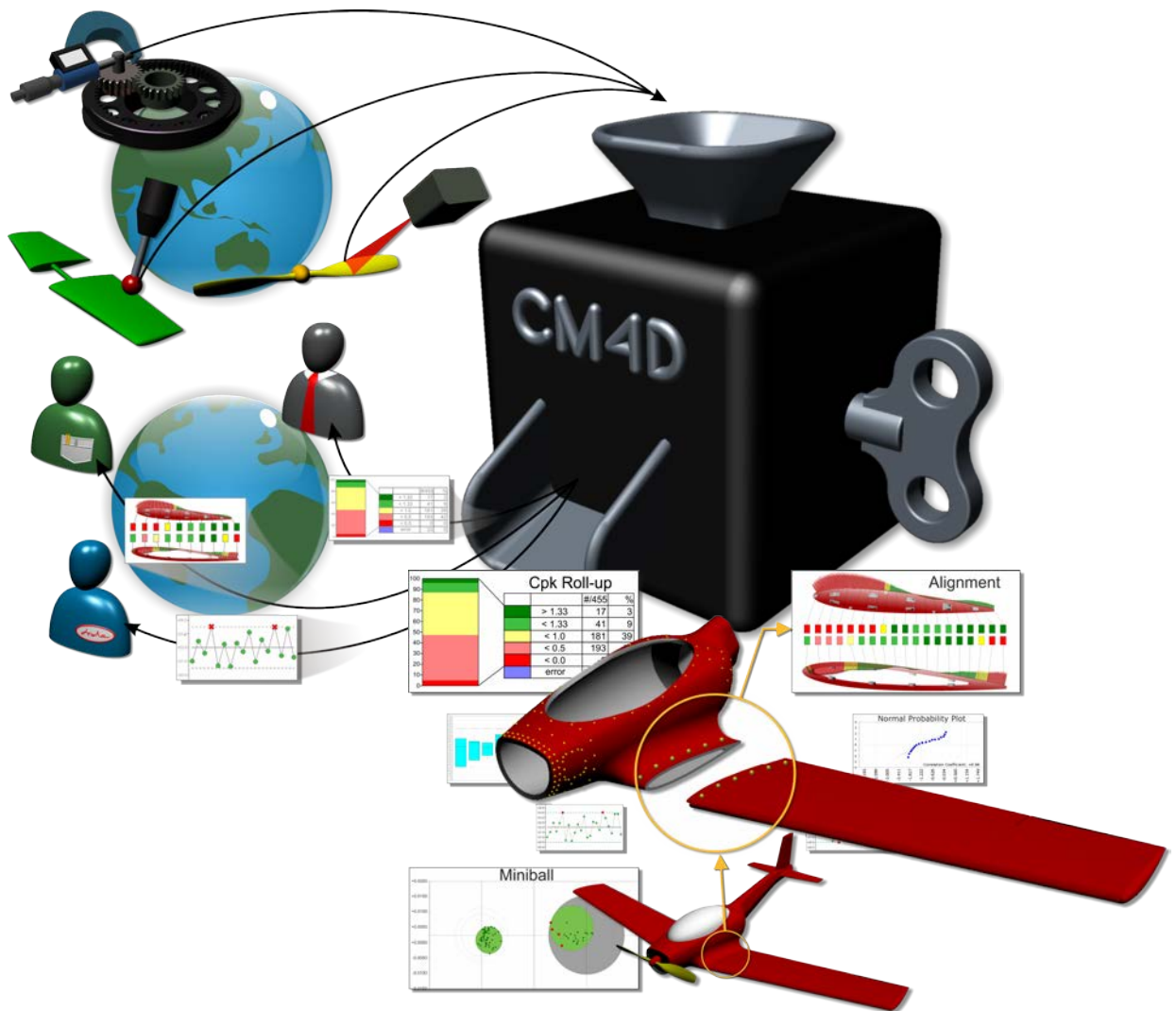


# ATS cm4d<sup>®</sup>

## What's New in v21



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## v21.5.9.900

### General Notes

- Build Date: October 25, 2017

### Program Fixes

#### CM4D Scheduler

Corrected item	What it means
Event Alarm Templates Crash	When a template that has event alarms set up is run through Scheduler, CM4D crashes. TFS #50793

## v21.5.8.900

### General Notes

- Build Date: October 19, 2017

### Program Fixes

#### CM4D Classic

Corrected item	What it means
Undo AutoReport Crash	Undoing the AutoReport Layout causes CM4D to crash. TFS #50551 – Also applied as a Hot Fix in v23.1.4.900.

## v21.5.7.900

### General Notes

- Build Date: October 9, 2017

### Program Fixes

#### CM4D Classic

Corrected item	What it means
Spectrum Not Working for ~dev~	The variable ~dev~ is not working for the Spectrum functionality. TFS #50443
JT Images Crash	CM4D crashes when a routine with multiple JT images is loaded. TFS #50420

#### CM4D Scheduler

Corrected item	What it means
Report Name Variables	Variables such as ~rout~, ~samp~ and ~samp,active~ are not resolving when used as part of Managed Report Name. TFS #37279

## v21.5.2.900

### General Notes

- Build Date: September 5, 2017
- CM4D Web v21.105.3.900

### New Features

#### CM4D Scheduler

##### 1. Unselect All Managed Reports

An “Unselect All” option has been added to the Managed Reports dialog in Scheduler Manager.  
TFS #49431

### Program Fixes

#### CM4D Classic

Corrected item	What it means
Crash on opening Feature Properties dialog	When a document has routine(which has 3d image assigned) and there is no View on the currently active sheet it crashes cm4d on Trying to open Edit Feature dialog. TFS #49429
Cannot create/edit Limits for Subroutines	When editing Subroutine Features, the Create/Edit Limits button in the Feature Editor does not work. TFS #48312
Cannot identify the source Routine of a Subroutine feature	When selecting Features of a Subroutine in the Alignment dialog, the Feature key includes the Subroutine Key. For Features relying on Handedness of a source Routine, it is impossible to differentiate the Features when selecting them as Alignment datums. <u>Note:</u> Now the Source Routine Key will be shown instead of the Subroutine Key.

#### CM4D Interactive

Corrected item	What it means
Empty Sticky Report list	If the Query Control dialog is opened via the “Find Routine” right-click option in the nav tree, the Sticky Report dropdown list for that Routine appears empty. TFS #49430
View Edit Mode – Single Click	Views go into Edit Mode using a single click, so features cannot be selected within the view. TFS #15981

## CM4D Scheduler

Corrected item	What it means
Cannot select Managed Reports with space bar	In v20, Managed Documents could be checked/unchecked for a job in Scheduler Manager using the spacebar on the keyboard. Once Managed Reports replaced Managed Documents in v21, the spacebar can no longer be used to select Managed Reports for a job. TFS #49432



## v21.5.1.900

### General Notes

- Build Date: May 14, 2017
- CM4D Web v21.105.1.900

### New Features

#### EventSmith

##### 1. Specify Outbound Email Address

The email address that appears in the "From" field on EventSmith email notifications can now be configured. This allows for users with strict email server policies to configure EventSmith with an email that is allowable in their network.

To configure the email that will be used as the "From" address on all event notifications, enter the email in Site Manager for the user that is running the EventSmith service.

### Program Fixes

#### CM4D Classic

Corrected item	What it means
Table "Cell style/Format" settings are ignored	The Format options of the Cell Style properties of a Table are not applied when using a DataSet as the DataSource. TFS 46005
The ~feat,label~ variable is resolving as '0.00'	In a table, unchecking the Base option in the Cell Styles Format tab causes the ~feat,label~ variable to resolve as '0.00' instead of the label string. TFS 46006
Rotation of WYR image is slow	Rotating a large .wyr image is extremely slow, almost to the point where it is impossible to move the image at all. TFS 46104
Classic and Interactive showing differences on "Distribution Analysis Report"	There is a difference how a formula used for setting the scale of a chart is shown in CM4D Classic and how it is shown in CM4D Interactive. TFS 46107
Grid does not show rows sorted when Dataset Sort rows is used	If the Sort Rows option is enabled in the DataSet General properties, the modified sorting is not reflected when the DataSet is viewed in the Grid. TFS 46000
When Dataset Sort Rows function is on the Purge Unused Report Features does not work correctly	Annotation are not pointing to Feature Markers in the View. When the Purge Unused Features option is enabled on the View, but the DataSet is using the Sort Rows function, annotation are not reflecting the sorting. As a result annotation are not syncing with the feature markers being shown in the View, and at times have a leader line that connects to a point without a feature marker. TFS 46001

Corrected item	What it means
Score with highest value bin order does not work properly	The DataStack Evaluation – Score resulted in an incorrect answer, particularly for scores that used highest value binning. TFS 47520

### CM4D Interactive

Corrected item	What it means
Cannot double-click Views to put into Edit Mode	Double-clicking on a View no longer puts the view into Edit mode to allow for active manipulation of the 3D image. TFS 15981

### CM4D Workcell

Corrected item	What it means
Workcell is not sending files to errorbox properly	When a measurement file with a routine that is not pre-selected in the 4dc document arrives, Workcell is not sending this routine to the Errobox. The files remains in the "available" folder. TFS 46105

### DataArchiver

Corrected item	What it means
Significance is not exported to the XMLs when Data archiving is performed	The Significance of a Feature characteristic is not included in the archive file. TFS 22932
Image path is not exported to the XMLs when Data archiving is performed	The image path of a Routine is not included in the archive file. TFS 45858

### DataUtility

Corrected item	What it means
Editing of filter labels for sample and feature is broken	Any changes made to a Sample Filter label or a Feature Filter label does not get updated in the database. TFS 46109

## v21.5.0.900

### General Notes

- Build Date: December 7, 2016
- CM4D Web v21.105.0.900

### Program Fixes

#### Classic

Corrected item	What it means
Animated Gifs are not animated when printed	When an Animated Alignment view is printed as a GIF, it is not showing the animation. <i>Note: This issue was on the Known Issues list for previous v21 releases.</i> TFS 33789
Report Thumbnails for Animated Alignment Views are not GIFs	When a Scheduled or Web report is generated that has an Animated Alignment for its Thumbnail, it is currently creating PNG files. A GIF should be created in place of the PNG if the View in the thumbnail sheet is set for animated alignment. TFS 33791
Views with Feature Mode set to Actual or Animate do not show more than one at a time	When using Views that have the Feature Mode set to Actual or Animate, only one View will display properly, the others will not show the Feature Markers (Actual) or the animation (Animate). This is per instance of CM4D. TFS 34884
Uncross leader lines checkbox is not persistent	The Uncross Leaders option is not staying checked for Views. TFS 34671

## v21.4.2.900

### General Notes

- Build Date: August 1, 2016

### Program Fixes

#### CM4D Scheduler

Corrected item	What it means
Some events are not being triggered by Scheduler jobs	When a multi-threaded Scheduler is opening and closing documents at a very fast rate, in rare cases one CM4D client may clean up temporary files prematurely, resulting in another job not completing.

## v21.4.1.900

### General Notes

- Build Date: July 14, 2016
- CM4D Web v21.104.2

### Program Fixes

#### DataSmithBatch

Corrected item	What it means
Scheduler Jobs not being triggered when using Oracle	When using Oracle, DataProcessed Scheduled Jobs are not being triggered when samples are processed using DataSmithBatch. TFS 36264

## v21.4.0.900

### General Notes

- Build Date: June 24, 2016
- Schema: 21a-21b
- CM4D Web v21.104.0

### New Features

#### EventSmith

#### EventSmith Application Assimilated by CM4D Web

The EventSmith Web application has been integrated into the CM4D Web application.

#### *Upgrading from the EventSmith Web Application*

There is no migration path required if you are upgrading an existing EventSmith system. Simply install CM4D Web v21.104.0 and restart your EventSmith Service.

### Program Fixes

#### CM4D Classic

Corrected item	What it means
~samp,date~ date formatting is ignored	When using the date parameter in the ~sample~ variable, the date formatting is not being applied when resolved. TFS 33984
Blank DataSet labels in document	Blank DataSet errors are appearing in the trace window, even when there are no blank DataSets in the document. TFS 30990
Feature Editor is not updating on close	In the Feature Editor, changes are not being saved when the dialog is closed. TFS 34740 – Also delivered as a Hot Fix in v21.2.2.900.

#### CM4D Scheduler

Corrected item	What it means
New CM4D Web users cannot print reports	When a new CM4D Web user is added to the Site, submitted reports sit in the queue without processing. The Scheduler services must be restarted before new users can successfully print web reports. TFS 35819

## v21.2.4.900

### General Notes

- Build Date: May 10, 2016

### Program Fixes

#### CM4D Classic

Corrected item	What it means
Sample selections in CM4D Web have unwanted selections by default	Samples set in the Select Samples dialog appear in a managed report even if the Use Selected Samples radio button is not selected as the load method in the Load Samples dialog at the time a managed document is saved. TFS 35678

## v21.2.3.900

### General Notes

- Build Date: May 6, 2016

### Program Fixes

#### v21 Migration

Corrected item	What it means
Sheet sets out of order after migration	The sheetset order in the managed reports is not being maintained properly during the migration from v20 to v21. Does not effect new installations. TFS 35619

## v21.2.2.901

### General Notes

- Build Date: April 25, 2016

### Program Fixes

#### CM4D Classic

Corrected item	What it means
Feature Editor is not updating on close	In the Feature Editor, changes are not being saved when the dialog is closed. TFS 34740 – Fixed in v21.3.0 but delivered here as a Hot Fix.

## v21.2.1.900

### General Notes

- Build Date: March 18, 2016

### Program Fixes

#### CM4D Classic

Corrected item	What it means
Alt+Right-Click in Views functionality missing	Holding the Alt key and clicking on a feature should highlight the feature point. TFS 34165.

## v21.2.0.901

### General Notes

- Build Date: March 02, 2016
- Schema: 21a-21b
- CM4D Web v21.102
- v21PreMigrator v1.0.0.7

### 1. v21 Migration

If you are upgrading to CM4D v21.2.0 from v20, all PreMigration Analysis of a v20 system must be done with v1.0.0.7 of the v21PreMigrator tool.

#### Oracle

Support for migrating Oracle databases has been added as of this version. Migration of Oracle databases must be completed in CM4D v21.2.0 (Site Schema 21b).

#### SQL Server

Migration of SQL Server databases can be completed in either CM4D v21.0.0 (Site Schema 21a) or CM4D v21.2.0 (Site Schema 21b). If you already completed migration in v21.0.0, then you can simply update your CM4D install to v21.2.0 and run the UpdateSiteSchema21b.sql script on your Site database.

#### Report Tag Source

One large benefit to completing the migration in v21.2.0 (rather than v21.0) is that a new option has been added to this version of the v21PreMigrator Analysis tool that allows you the option of assigning the *Report Tag Source* to migrated Managed Documents via the migration map files.

### New Features

#### CM4D Classic

### 2. Report Tag Source

A new property has been added to Managed Reports to determine where the Managed Report will get its Report tags. The Report tags can now be obtained according to one the following five options:

- **Document Only** - only tags that are set in the Managed SheetSet(s) within the Managed Report will be used by CM4D Web.
- **None** - no tags will be used by CM4D Web, even if tags are available for the Managed Report.
- **Global Only** - only Report Tag Defaults set in SiteManager will be used by CM4D Web.
- **Global if No Document** - tags assigned at the Global level will be used ONLY if no tags are set for any SheetSet(s) in the Managed Report.
- **Both** - tags from both the Managed SheetSet(s) and Report Tag Defaults set in SiteManager will be used whenever available.

The Report Tag Source can either be set manually on new or existing Managed Reports, or set during the Migration of v20 documents (as long as the migration is done in v21.2.0). Global Report Tags are selected in SiteManager (see page 17).



### 3. Configurable Characteristic Labels

A control has been added to the Document Defaults that allow you to customize the characteristic label that will be used for Position or Nominal characteristics. This label will be used to display the Position or Nominal characteristic when used with variables such as ~chr~ and ~chr,1~. By default, these are set to "Pos" for Position and "Nor" for Normal.

For example, if you wanted to use "Vec" as the label for your Position characteristics, you would enter the label text into the Position Chr: field in the Document Defaults.

Axis/Characteristic Labels

Primary Axis:	Secondary Axis:	Tertiary Axis:	Position Chr:	Normal Chr:
X	Y	Z	Vec	Nor

- The variable ~chr~ would resolve as "Vec".
- The variable ~chr,1~ would resolve as "V".

TFS 30901

### CM4D Scheduler

#### 4. Hourly Job Timing

A new "Hourly" option for Scheduler Timed job has been added. Previously, "Daily" was the smallest time increment for scheduled reports.

TFS 25967 – Also delivered as a patch in v20.4.2.901.

### SiteManager

#### 5. Global Report Tags

Report Tags can now be configured at the Site database level, for all Managed Reports that use "Global Only", "Global If No Document" or "Both" as the Report Tag Source (see above section for Source descriptions).

These Global tags are set in SiteManager. In the Settings menu, select the option Global Report Tags. Check or uncheck the boxes next to the Tags that you want to use for Managed Reports that use the Global option.

Any changes to Global Report Tags will be automatically updated for all Managed Reports that use Global tags the next time the Managed Report is printed (for Scheduler and/or Web).

Report Tag Defaults	
<input type="checkbox"/>	Site Label
<input type="checkbox"/>	DataSource Label
<input type="checkbox"/>	Routine Label
<input type="checkbox"/>	Routine Key
<input type="checkbox"/>	Routine Description
<input type="checkbox"/>	Routine Filters
<input type="checkbox"/>	Feature Label
<input type="checkbox"/>	Feature Key
<input type="checkbox"/>	Feature Description
<input type="checkbox"/>	Feature Filters
<input type="checkbox"/>	Sample Label
<input type="checkbox"/>	Sample Key
<input type="checkbox"/>	Sample Description
<input type="checkbox"/>	Sample Filters

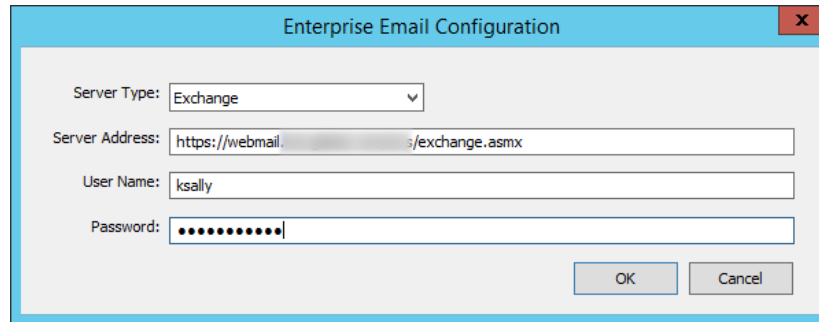
Custom Report Tags can still be set at the Document level by adding tags to Managed SheetSets.

TFS 30839

## 6. Email Configuration for CM4D Web

If you choose to allow users to self-register for access to CM4D Web, you must configure the email server that will be used to send and receive the email notifications from users as they register.

Go to the Settings menu in SiteManager and select Enterprise Email Configuration. Enter the information for either an email exchange server or an SMTP server. If your server uses authentication, be sure to enter valid credentials as well.



Any users in the Site that have the Site Data Administration privilege will receive User Registration notification emails. The Site Data Administration user(s) must have a valid email address entered in the Users tab of SiteManager in order for the registration notifications to be successfully delivered.

If you do not want to allow users to register this way, do not configure the email settings. Manually add all of your CM4D Web users in SiteManager and assign them to a Group. Users who attempt to log in to CM4D Web that have not been added to SiteManager will receive a login access error.

## Program Fixes

### CM4D Classic

Corrected item	What it means
Dataset statistics variable is not resolving properly	The SPC variable $\sim\text{siftrule}, n > 1, \text{cpk}\sim$ (where the sift rule is designated by number, and that number is greater than 1) does not resolve. TFS 22335 – Also delivered as a Hot Fix in v17.5.1.
Selecting a new Routine changes the Query label	If you select a new Routine for an existing Query, the label of the Query changes to the label of the Routine. In addition, this does not update references in the document, such as from DataSets. TFS 30989 – Also delivered as Hot Fix in v21.0.5.
Routine Selector crashes CM4D	When an unmanaged database is used, there is an instant crash when Routine selector is opened. TFS 33042 – Also delivered as Hot Fix in v21.0.5.
CM4D Document Performance	CM4D documents are very large, and are slow to open/save. TFS 13716
Feature Marker Materials crash	When trying to open the View Feature Markers Material dialog, CM4D crashes if there is no part image loaded. TFS 33805
Copy Function not working in the Managed Document Administration dialog	In the Managed Document Administration dialog, the Copy function is not actually creating the document file, even though the copy appears in the list of Managed Documents. TFS 33960

## CM4D Scheduler

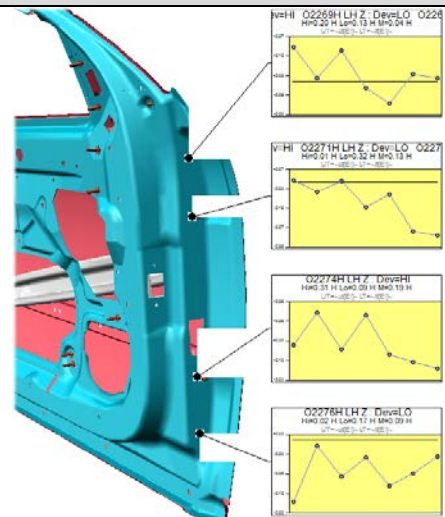
Corrected item	What it means
Internal script does not run in Scheduler	<p>If a Managed Document has internal scripting that opens a dialog is used in Scheduler, the job will not complete successfully.</p> <p><b>Solution:</b> Any scripting that opens a dialog cannot be used for Scheduler jobs.</p> <p><b>Warning:</b> Always use extreme care when using internal scripting in documents that will be used by Scheduler, since Scheduler sometimes handles documents in a different way than when the document is opened manually in Classic.</p> <p>TFS 28561</p>

## v21 Migration

Corrected item	What it means
Event Scheduler jobs do not migrate	<p>Scheduler Jobs with the "Event" Report Type are not migrating.</p> <p><b>Solution:</b> Required a change to the v21PreMigrator to allow for Event jobs. If you have already run the PreMigration Analysis, re-run using v1.0.0.7 of the PreMigrator tool provided with this release.</p> <p>TFS 28913</p>
Crash in SiteManager log when re-initialize migration	<p>Crash in SiteManager log when re-initialize migration for removing broken Managed Documents.</p> <p>TFS 33729</p>

## Windows 8 and 10

Corrected item	What it means
Leader lines drawn over a View cause white patches that obscure the image	<p>There was a known drawing issue in CM4D on Windows 8 and Windows 10 where leader lines cause rectangular patches to obscure the View.</p> <p>TFS 30686</p>



## v21.0.6.900

### General Notes

Build Date: February 5, 2016

### Program Fixes

#### CM4D Scheduler

Corrected item	What it means
Scheduler Performance Problems	When a large number of jobs (1350+) are running with a large number of managed documents (9200+) included in the Managed Reports, the client information in the Scheduler Monitor tab does not refresh when there is more than 1 CM4D Client running. TFS 33530

## v21.0.5.900

### General Notes

Build Date: January 13 2016

### Program Fixes

#### CM4D Classic

Corrected item	What it means
Selecting a new Routine changes the Query label	If you select a new Routine for an existing Query, the label of the Query changes to the label of the Routine. In addition, this does not update references in the document, such as from DataSets. TFS 30989 – Fixed in v21.2.0, but also delivered as a Hot Fix here.
Routine Selector crashes CM4D	When an unmanaged database is used, there is an instant crash when Routine selector is opened. TFS 33042 – Fixed in v21.2.0, but also delivered as a Hot Fix here.

#### DataUtility

Corrected item	What it means
Datautility does not run without Site Database	When using an unmanaged database, DataUtility will not open. TFS 31116

## v21.0.4.900

### General Notes

Build Date: December 12, 2015

### Program Fixes

#### CM4D Classic

Corrected item	What it means
3D image does not display properly	The image does not rotate with the view. TFS 31089

## v21.0.3.900

### General Notes

- Build Date: December 7, 2015

### Program Fixes

#### CM4D Classic

Corrected item	What it means
Missing checkbox for "Run AutoReport" in SheetSet properties	The Run Auto Report check box (for Scheduler Managed Documents without a View) is missing after SheetSet Property dialog redesign for v21 features. TFS 30997

#### CM4D Scheduler

Corrected item	What it means
Failures when generating reports	Scheduled Reports that included Auto Reports fail if the number of Sheets in the originally saved document was greater than the number of Sheets generated by the AutoReport when the job was run. TFS 30987

## v21.0.2.900

### General Notes

Build Date: November 29, 2015

### Program Fixes

#### CM4D Classic

Corrected item	What it means
CM4D image scaling not applying	Scaling set on 3D images is not being applied in CM4D. TFS 30957

## v21.0.1.900

### General Notes

- Build Date: October 20, 2015

### Program Fixes

#### v21 Migration

Corrected item	What it means
Prefixes missing backslashes are not handled correctly	If the Report Paths map file "Report Name Prefix" field is used, and is missing the trailing backslash, the resulting report ends up with the Prefix as part of the PDF file name instead of creating the correct subfolder. TFS 28349
Changing the label of an existing Depository results in a duplicate Depository	Changing a Depository Label in the Migration Map file, but not the Depository Path, results in a legacy duplicate depository. TFS 28350
Failed Documents are not being flagged as Failed	During Migration, if a document fails to migrate, the Fail counter does not reflect this. TFS 28427

#### CM4D Classic

Corrected item	What it means
Default Managed reports use file name not managed document name	When CM4D creates default Managed Reports, it is using the File Name in the Managed Report label. This should use the Managed Document Name in the Report name. TFS 28442
Queries with missing Routines fail to print in Web	If a Managed Report includes a SheetSet from a Managed Document that has a Query that fails to load (e.g., Routine was deleted), the report fails to print in Web. TFS 28348

## v21.0.0.903

### General Notes

- Build Date: October 14, 2015
- Schema Version: 21a/21a
- ATS Licensing Version: 2.1
- CM4D Web v21.100

#### 1. v21 Migration

---

Upgrading an existing CM4D system to v21 requires migration. The migration process from v20 has been detailed in the document “*v21 Migration Guide*”. This instructional guide walks you through all of the steps needed to get everything upgraded to v21. Please review these instructions carefully before upgrading your system to v21, as there are some pre-migration steps you need to complete ***before the upgrade***.

Please note that the Pre-Migration Analysis tool provided to facilitate the upgrade is actually run on a current v20 (Schema 20b) database. It does not alter the existing system, and changes are only made once you have upgraded to v21 and run the Migration tool included in v21.

Before testing and/or performing this upgrade, make sure to ***back up all of your v20 Managed Documents and your Site/CM4D Databases before you upgrade to v21***, as the migration is irreversible.

#### 2. New Application: CM4D Web

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A complete overhaul has been done on WTC (Web Template Control) web reporting application. The new version, called **CM4D Web**, is a much nicer and user-friendly web interface, takes advantage of new technologies, addresses functional issues, and offers far better overall performance.

CM4D Web is an internal web server application that allows users not trained in the use of CM4D to generate or view CM4D reports via a web interface. Once logged in to the system, they can print from a list of available reports, or they can view or delete reports that they have previously printed. If the system is also running Scheduler reports, users can view and print the list of reports printed by Scheduled Jobs. Before a user generates a report, they can choose to first customize what Sample data is loaded in the report prior to printing. For example, the user can change the number of Samples that are loaded in the report, select a date range, or select specific samples, as well as limiting the number or type of Samples based on Sample Filter selections.

User-generated reports are stored in a folder dedicated to that single user, while Scheduler-generated reports will be available to all users in the system. The reports generated by Scheduler can only be viewed via the web interface, they cannot be customized or deleted by Web users. CM4D Web has a separate installer, but it interacts with and utilizes the CM4D Scheduler and CM4D Launcher services and applications on the host server to generate and print CM4D Reports.



### 3. ATS Licensing 2.1

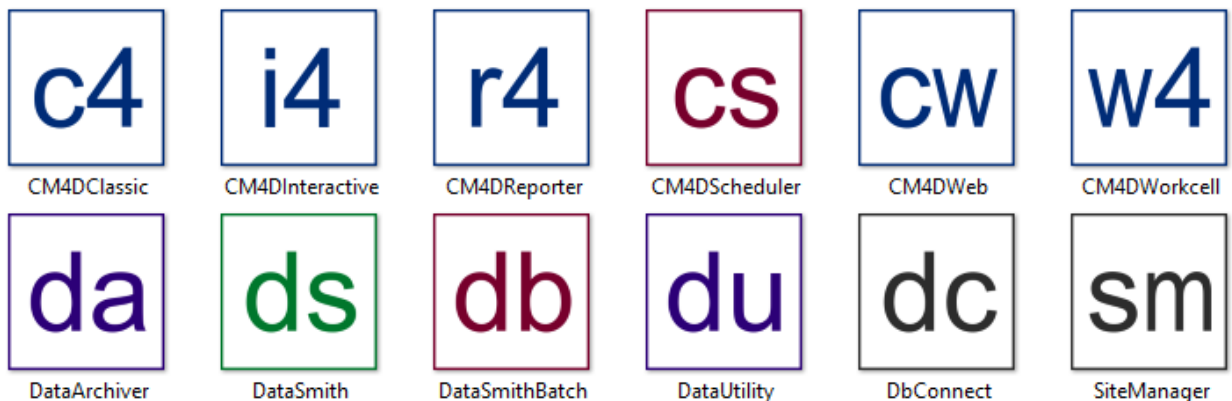
A new version of ATS Licensing has been released that will need to be used with v21 of ATS CM4D. The new ATS Licensing Server version includes some new features:

- Separate Licensing Monitor
- Use Different License Databases
- Search Criteria for Licenses
- Named Leases Include Computer Name
- Approve/Reject Lease Requests
- Release Licenses
- Optional Backup License Server Connections

Please see the ATS Licensing Server documentation for more information.

### 4. New Application Icons

For this version, look for some new application icons:



These will be easier to recognize, even when using the smallest size. Also, each icon color represents a category of application rather than a specific product:

- **Blue** – Reporting (*all modes of CM4D – Classic, Interactive, Web, and Workcell*)
- **Green** – Data Input (*DataSmith*)
- **Purple** – Data Management (*DataArchiver and DataUtility*)
- **Red** – Configuration (*CM4D Scheduler Manager and DataSmithBatch Manager*)
- **Grey** – Administrative (*DbConnect and SiteManager*)

### 5. CM4D.ini File

This release includes a fix for CM4D Interactive that required a change to order of the contents of sections of the Cm4d.ini file. Please be sure to move any custom ini settings over to this new file. You can refer to the Program Fixes section for a description of the bug fix on page 37.



## New Features

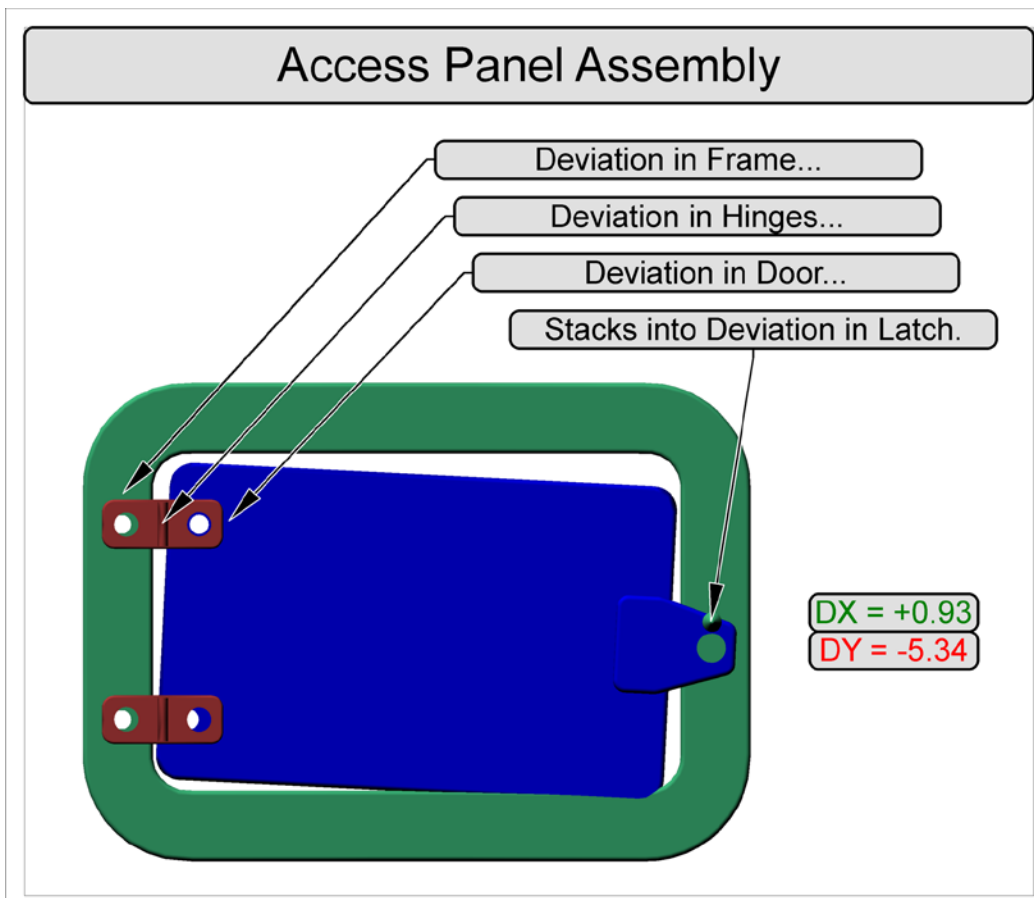
### CM4D Classic

#### 6. Stacked Alignments

A new addition to CM4D's Alignment are **Stacked Alignments**. Stacked Alignments are when one part is aligned, then that Alignment result is used to align the next part. By stacking the data in this way, CM4D can predict the result of an assembly of multiple components, or parts.

For the Access Panel Assembly scenario shown in the image below, one goal is to predict the deviation measurement between a point on the latch of a door and a point on the frame. The challenge of performing this calculation is that these two points are influenced throughout the assembly process by the deviations of the different components of the access panel assembly.

For example, the Frame has holes on the left side for the two Hinge attachments, and one point on the right that controls where the Latch connects with the door. If there is any deviation in these points on the frame, the attachment of the Latch is going to be affected. Likewise, any resulting deviation in the Hinges will affect how the Door attaches to the Hinges, and so on until the last piece is added to the assembly. These deviations can all add up to an access panel that does not fit properly.



By stacking up multiple Alignments virtually, CM4D can predict the result of an assembly of multiple connected parts, letting you fix any problems before the parts are even assembled.

TFS 22892, 24009 – This feature was previewed in v20.5 for specific development partners.

## 7. Animated Alignment

Another new feature of CM4D's Alignment is that the deviations of parts can be clearly displayed by animating the 3D model. CM4D animates the 3D images to show a comparison of the Nominal position of a part to a representation of the measured position of the part. This is accomplished by the calculations obtained from performing a Stacked Alignment. One manufacturing plant will display this type of animation on screens along the production line, allowing assembly line operators on the shop floor to see if the parts are starting to have issues that will affect the entire assembly. If issues arise, operators can make small adjustments to the parts right then that will allow the final assembly to be successful.

TFS 22894, 22892 – This feature was previewed in v20.5 for specific development partners.

## 8. Allow Empty or Partial Datum for Alignment

When doing an Alignment, an empty or partial datum is now supported, according to the following rules and conditions:

- If you leave A1, A2, and A3 blank, then the A Datum will not be changed.
- If you leave B1 and B2 blank, then the B Datum will not be changed.
- If you leave C1 blank, then the C Datum will not be changed.
- If you assign A1, but leave A2 and A3 blank, then the orientation of the A datum will not be changed, but the location of the A datum will be adjusted according to A1.
- If you assign B1, but leave B2 blank, then the orientation of the B datum will not be changed, but the location of the B datum will be adjusted according to B1.

TFS 22907 – This feature was previewed in v20.5 for specific development partners.

## 9. Midpoint Support for Alignment

Midpoints of Midpoints are now supported for Alignments.

TFS 22891 – This feature was previewed in v20.5 for specific development partners.

## 10. View Feature Modes

The View annotation has some new options for what and how Feature Markers appear in the View.

- **Standard** – the way Views were before v21; previously called “Nominal”. The default Feature Markers are used to display the Nominal values.

**i** All Feature Marker settings are predefined with default Feature Marker styles for Standard (previously Nominal) values. All of these Feature Markers can be assigned custom “Materials” (color), and some specific types can be assigned a custom marker type (shape).

- **Nominal** – new in v21; a mode for the View that replaces the previous Nominal mode; used to display special Feature Markers for the Nominal data. Feature Markers are predefined (non-customizable) shapes and colors, enhanced from the standard feature markers to display Nominal data in a specific, analytical way. Support for this mode is limited, as it is only available for specific Feature/Characteristic combinations. See the Help file for details on what is supported.

**i** Nominal and Actual modes only work if the DataSource of the View is a DataSet.

- **Actual** – available since v13; used to display special Feature Markers for the Actual data. Feature Markers are predefined (non-customizable) shapes and colors, enhanced from the standard feature markers to display Actual data in a specific, analytical way. Support for this mode is limited, as it is only available for specific Feature/Characteristic combinations. See the Help file for details on what is supported.

- **Animated Alignment** – new in v21; while in Edit Mode, the 3D model/image moves to show animation of the part Alignment. A report with this type of View Feature Mode can be printed as an animated GIF. When the Sheet used as a ReportRecord thumbnail has this type of View, the ReportRecord thumbnail created will be an animated GIF as well.

Task 22894 – This feature was previewed in v20.5 for specific development partners.

## 11. Managed Document Administration

A dialog has been added to CM4D Classic for Document Managers to perform administrative tasks on Managed Documents, such as moving, copying, or deleting Managed Documents.

The Managed Document Administration menu only appears if you have the Document Manager privilege, and no CM4D document is opened.

TFS 27823, 11683

## 12. New Output Formats – PNG & GIF

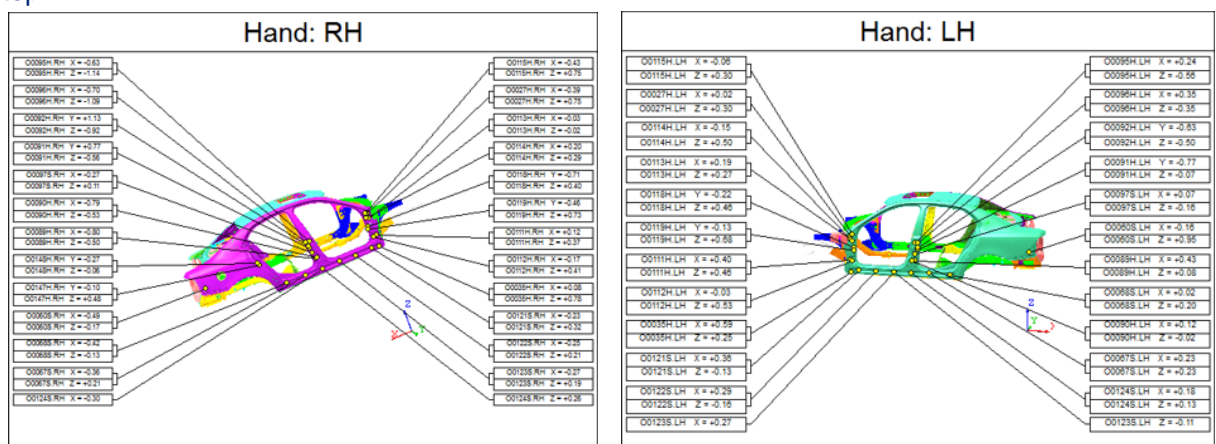
PNG and GIF image types are now available in different areas of CM4D output.

- **Print Misc** - the menu option File>Print Misc... now contains new options that will output the report sheet as a PNG or GIF file.
- **DataSet Event Options** - in the DataSet Properties Event tab, when selecting the Sheet Image type (which is what will be attached to the event notification email), there are now options to use PNG or GIF.
- **Report Record Thumbnails** – when using ReportRecord, thumbnails are now created as either a PNG or GIF, instead of a BMP. The file format you get is not configurable, but rather is dependent what is on the thumbnail sheet.
  - If you have a sheet with a View that is set to the Animated Alignment type, your thumbnail will be a GIF.
  - If you have sheet with a View that is set to any View type (other than Animated Alignment), or does not have a View at all, your thumbnail will be a PNG.

TFS 22897, 24569

## 13. Mirror Document

A new feature has been added to mirror an entire document at once, which will be a great tool for speeding up template development for symmetrical data. For example, if you have built a template in which all annotation are connected to a Left hand Routine of a part, you can then use Document Mirror to convert the entire document over to use the Right hand Routine of the same part in one step.



This functionality expands on the 'Mirror Annot around a View' option that was added in v20.0. However, rather than only being able to mirror annotation around a View of a single Sheet, Mirror Document will automatically go through every annotation, view, and DataSet in your entire document and reset all of the properties according to your new Routine and Feature selections.

The process of mirroring the document will be guided via a wizard in CM4D Classic. The wizard allows you to find the feature in the Routine of the other hand so that it does not have to be done manually. You will need to be familiar enough with your data and how it is named so that you can find the corresponding Routine Label. But once that selection is made, CM4D takes over and matches up the Features from the current Routine to the Routine selected as the Mirror. These Feature matches are suggested based on one of the following:

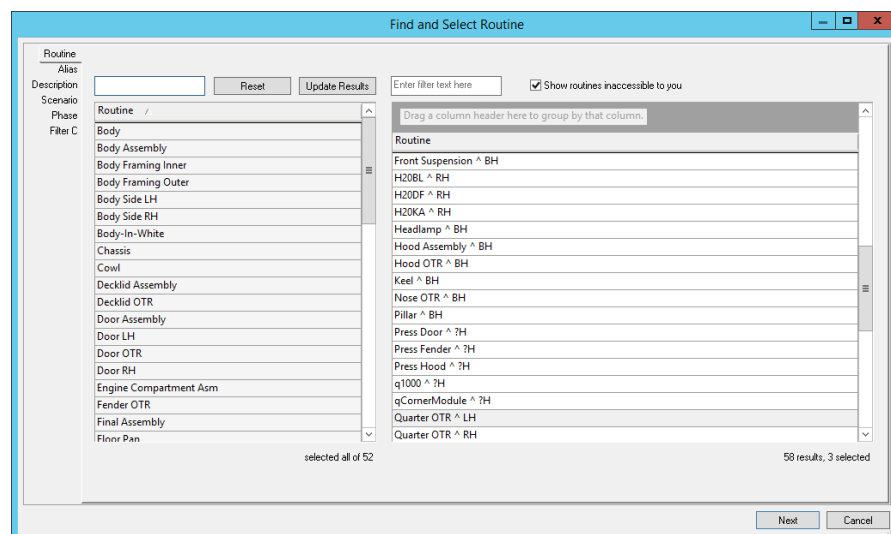
- **Label Match** - Features have the same label.
- **Label Similar** - Feature Labels are the same except for an 'L' or 'R' at the beginning or end of a Feature label. For example, if a feature in the document has a label that begins with an 'L', then we will look for a matching feature label that begins with 'R'.
- **XYZ Mirror** - The XYZ coordinates are mirrored.
- **XYZ Match** - The XYZ coordinates are the same.
- **Alias Match** – The Alias of both Features are the same.

In the wizard, you will be asked which Routine and features you want to mirror, and then CM4D will fix all DataSources, Views, mirror Cameras, and mirror Annot around the view so that the local annotation pattern is mirrored according to the geometry.

TFS 18752

## 14. Routine Selector

An interface has been added to allow for advanced searching and filtering of Routines when loading data into a document. This will allow you to easily sort through a large number of Routines to find the one you want to load. Using the same type of controls as the Managed Document Selector introduced in v20, Routines may be searched for and sorted by Label, Description, Alias, Filters, and more.

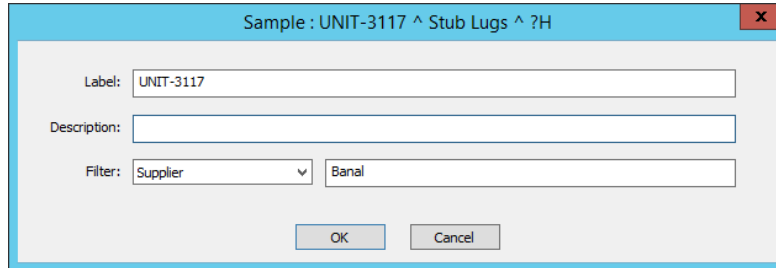


The first time you attempt to load a Routine, you will be prompted to configure the Routine Selector. The configuration settings (**File > Routine Selection Settings**) may be saved as Public, for a particular Group, or for the current User.

TFS 22824

## 15. Modify Sample Properties

Properties of a Sample, such as Label, Description and Filter, can now be modified via a Properties dialog inside CM4D Classic.



This property dialog is also available in CM4D Interactive.

TFS 18749

## 16. Save Dialog Size

Changes made to the size and position of the Managed Document Selector will be remembered for each User. This will be saved in the Site database.

TFS 22830

## 17. New Variable for Sample Serial Number

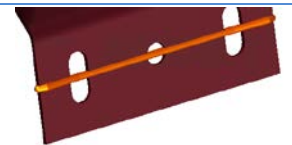
A new variable, `~sample,serial~`, has been added that resolves the Sample Serial # (number).

TFS 22901

## 18. Feature Marker for Range Characteristics

Range characteristics now have a unique feature marker in the Standard Feature Mode in a View.

TFS 22909



## 19. IJK Characteristics for Flush and Gap Features

Flush and Gap feature types can now have IJK vector characteristics. Although not yet used by any existing functionality, adding IJK characteristics does not alter any current analysis or reporting.

TFS 22905

## 20. DataSet Event

### ***Keep Event from Merged DataSets***

So you have multiple Event Triggers that you want to monitor, but only want a single e-mail notification to be sent if any of those Events has triggered? Use the new Event Trigger, *Keep Event from Merged DataSets*.

When this trigger is used, all the Event Triggers assigned to the individual DataSets inside of a DataStack will be used to trigger events, instead of the DataStack itself. When this Event Trigger type is selected for one Trigger, the other will automatically be set to the same type. The Event Properties for the DataSets will be ignored, and the Event Properties for the DataStack will be used for generating the Event notification.

TFS 22896



## 21. Special Case SPC Checks

Four new variables with specific rules have been added to report special-case SPC checks:

1. `~tofas,rule1~` - Is the last value Out of Tolerance. In the DataSet, only the last cell is checked. If it is Out of Tolerance, then a 1 will be returned.
2. `~tofas,rule2~` - Is the last value more than 60% of the Tolerance. In the DataSet, only the last cell is checked. If the value is more than 60% of the Tolerance, then a 1 will be returned.
3. `~tofas,rule3a~` - Is the Cpk less than or equal to ( $\leq$ ) 1.33, and the range of the last five cells is more than 50% of the Tolerance band. In the DataSet, only the last five cells are checked. If the Cpk is  $\leq 1.33$  and the range is  $>50\%$  of the Tolerance band, then a 1 is returned.
4. `~tofas,rule3b~` - Is the Cpk greater than ( $>$ ) 1.33, and the range of the last five cells is more than 25% of the Tolerance band. In the DataSet, only the last five cells are checked. If the Cpk is  $>1.33$  and the range is  $>25\%$  of the Tolerance band, then a 1 is returned.

These variables require a DataSet as the DataSource, and each variable will only return 0 or 1.

- **0** = False (rule condition is not met)
- **1** = True (rule condition is met)

TFS 24011

## 22. Unsynchronized Samples

When loading Samples from the database, you now have the option to load them without any synchronization. This is useful when the Samples loaded are from different Routines and may not share Features (or other information) that is normally used to align them in the dataset. By leaving them Unsynchronized, the Sample values will be loaded in the order they exist in the database, and will be synchronized by the last value for each sample, or the right-most cell in the dataset.

For example, say we loaded the following two Samples:

- Sample 1 – Feat3, Feat4, Feat5
- Sample 2 – Feat 21, Feat22

If attempting to Synchronize, common information cannot be found:

Sample 1	Feat3	Feat4	Feat5		
Sample 2				Feat21	Feat22

Using the Unsynchronized Sample Load option:

Sample 1	Feat3	Feat4	Feat5
Sample 2		Feat21	Feat22

TFS 24013

## 23. DataSet Variable Parameters

New parameter options have been added for the `~dataset~` variable to report summary statistics on data in a DataSet. New variables available:

- `~dataset,cp~`
- `~dataset,cpk~`
- `~dataset,cr~`
- `~dataset,pp~`
- `~dataset,ppk~`
- `~dataset,pr~`
- `~dataset,stddev~`
- `~dataset,lowerlimit~`
- `~dataset,upperlimit~`
-

There are two limitations to calculating Cpk on a DataSet:

1. All cells in the DataSet must have a Tolerance, and the Tolerance must be the same for all cells in the DataSet.
2. Subgroups will not be applied when using the Cpk parameter.

 Without Subgroups, Cp, Cpk, and Cr will be the same as Pp, Ppk, and Pr, respectively.

TFS 22294 – This was also delivered as a Hot Fix in v17.5.

## 24. Sift Rule Variables

A new variable, `~siftrule~`, has been added that reports various summary statistics on data in a DataSet that is associated with a particular Sift Rule. New variables available:

• <code>~siftrule, [], boxhi~</code>	• <code>~siftrule, [], percentvalid~</code>
• <code>~siftrule, [], boxlo~</code>	• <code>~siftrule, [], range~</code>
• <code>~siftrule, [], hi~</code>	• <code>~siftrule, [], rowcount~</code>
• <code>~siftrule, [], lo~</code>	• <code>~siftrule, [], sum~</code>
• <code>~siftrule, [], iqr~</code>	• <code>~siftrule, [], totalcount~</code>
• <code>~siftrule, [], invalidcount~</code>	• <code>~siftrule, [], conformcount~</code>
• <code>~siftrule, [], lif~</code>	• <code>~siftrule, [], nonconformcount~</code>
• <code>~siftrule, [], uif~</code>	• <code>~siftrule, [], percentconform~</code>
• <code>~siftrule, [], lof~</code>	• <code>~siftrule, [], percentnonconform~</code>
• <code>~siftrule, [], uof~</code>	• <code>~siftrule, [], cp~</code>
• <code>~siftrule, [], q1~</code>	• <code>~siftrule, [], cpk~</code>
• <code>~siftrule, [], q3~</code>	• <code>~siftrule, [], cr~</code>
• <code>~siftrule, [], mean~</code>	• <code>~siftrule, [], pp~</code>
• <code>~siftrule, [], median~</code>	• <code>~siftrule, [], ppk~</code>
• <code>~siftrule, [], nospeccount~</code>	• <code>~siftrule, [], pr~</code>
• <code>~siftrule, [], nospeccount2~</code>	• <code>~siftrule, [], stddev~</code>
• <code>~siftrule, [], outofspeccount~</code>	• <code>~siftrule, [], lowerlimit~</code>
• <code>~siftrule, [], outofspeccount2~</code>	• <code>~siftrule, [], upperlimit~</code>
• <code>~siftrule, [], percentinvalid~</code>	

When a Sift Rule variable is used with two parameters, the calculation is done only for the Sift Rule that is specified by the first parameter. The second parameter is the statistic that will be calculated on the data included in the Sift Rule specified by the first parameter.

The first parameter can be specified using one of the following options:

- **Number of Sift Rule** - the integer that indicates the position of Sift Rule in the list, as it appears in the Multiple Sift Rules dialog.
- **Label of Sift Rule** - label of Sift Rule.

Multiple Sift Rules

- 1 Surf F/A
- 2 Surf I/O
- 3 Surf H/L
- 4 Hole
- 5 Dist

Example using Number: `~siftrule, 3, mean~`

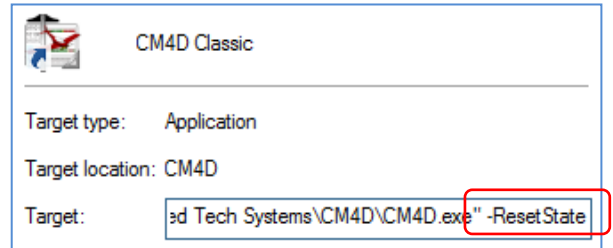
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Example using Label: `~siftrule, Surf H/L, mean~`

TFS 11688 – This was also delivered as a Hot Fix in v17.5.

## 25. Reset the Bar State

If at any time you want to reset the CM4D toolbars to their default state/placement, you can add the parameter `-ResetState` to the command line. When CM4D Classic is run with this command line argument, all toolbar/window/tree states will be reverted.



This command can also be used with DataSmith.  
TFS 23953

## 26. Enhancements to Logging

All error messages will now be written inside the standard log (\*.log) files. Files with the extension \*.err will no longer be created.

TFS 24551

## CM4D Scheduler

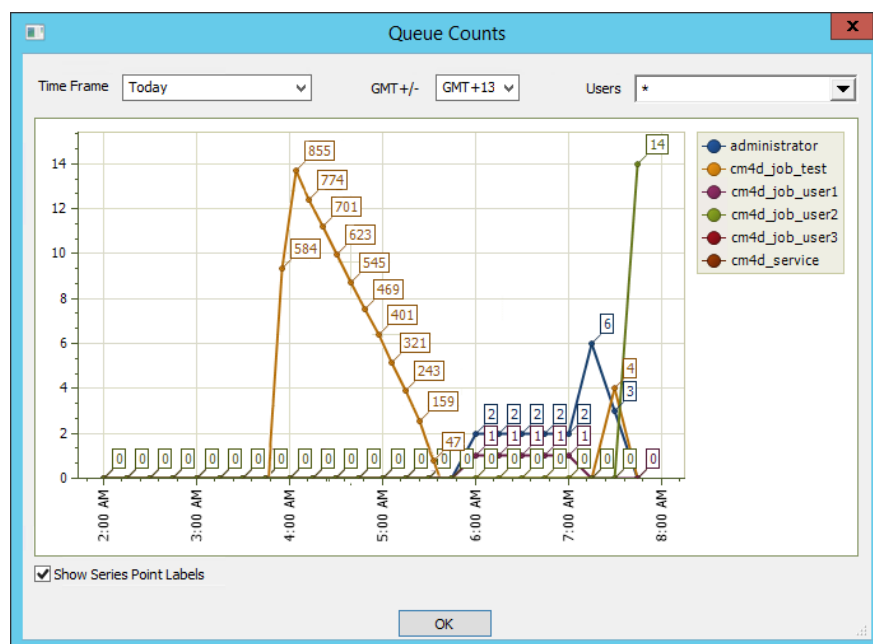
### 27. Filter Scheduler Manager

A new filtering option has been added to the CM4D Scheduler Manager that allows you to type in text strings that will dynamically filter out all rows except for those that contain the entered string. This option is available on every tab in Scheduler Manager.

TFS 18746

### 28. CAS Metrics Queue Count Monitoring Chart

A general monitoring chart has been added to Scheduler Manager that allows you to get an overview of the number of jobs being run for each user in the Scheduler Queue during set periods of time.



This chart will only populate with data if you have enabled Metrics and Monitoring in SiteManager.  
TFS 26241



## DataSmithBatch

### 29. Filter DataSmithBatch

A new filtering option has been added to the DataSmithBatch Manager that allows you to type in text strings that will dynamically filter out all batch job rows except for those that contain the entered string.

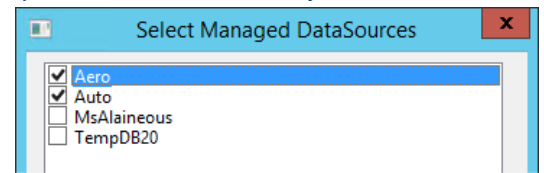
TFS 18747

## DataUtility

### 30. Select Active DataSource(s)

You can now select one or more DataSources as your active, or default DataSources. This setting is saved to your User profile, so that you will only connect to and search for data from the DataSource(s) that you have selected. Not only will it improve search times if you search on all DataSources, but also will narrow down the amount of data to look at before even setting any search parameters. The first time you run DataUtility in v21, a dialog will open prompting you to select which DataSources you want to connect to. Once you make your selection, DataUtility will remember that setting every time you run the application. If you want to change your DataSource selection, you can do so in the DataSources tab.


TFS 27929



## Services

### 31. CM4D Automation System (CAS) Metrics

A method has been added to gather data metrics and monitor the performance and health of the CM4D Automation Services - DataSmithBatch, CM4D Scheduler, and CM4D Launcher.

 At this time the CM4D Metrics and Monitoring system does not provide a way to consume (use) the information stored in the database, other than the **Queue Count Chart** (see page 32) in Scheduler. It is intended that the end user will use their preferred method for querying the database to retrieve and report the relevant data.

Information is collected on a regular basis and stored in a table in the Site database, which can then be retrieved with database queries. This monitor collects information about the automated services, so by querying the database tables, you can find out information about your processes. You can report such things as:

- Are my Services are still running?
- Which of my jobs have been processed?
- Which jobs are run most often by specific users?
- Were any of my Services stopped unexpectedly?
- What is currently in the Job Queue?
- How long did it take my Scheduler job to complete from Start to Finish?
- How long did it take from the time a data file appeared in my Inbox to the time I received my PDF report?

Metrics are not enabled by default, so to begin collecting metrics, a user with Site Admin privileges must turn on the option in SiteManager.

TFS 14515

## SiteManager

### 32. Enable Metrics and Monitoring

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SiteManager has a new option to enable the new Metrics and Monitoring. This is a global setting that will take effect for every Site, Database, and user. To turn on Metrics and Monitoring: select **Settings>Enterprise Profile Settings>Enable Metrics and Monitoring**.

#### *Scheduler Queue Count Interval*

Also included for Metrics and Monitoring is an option for how often you want to check the Scheduler Job Queue for a count of jobs currently in the Queue. For example, if you set this to '1 Hour', then every hour all users will be checked to see how many jobs each user has in the Queue. The job count for every user will be recorded as a row in the Site Database table.

TFS 18750

### 33. Export User List

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You can now output a list of Users to a comma delimited CSV file that includes the name of the Group, the user name, and the full name of the user. This User list could be used for things such as internal auditing purposes.

TFS 16534

## Program Fixes

### CM4D Classic

Corrected item	What it means
Absolute Sample Cutoff Dates are not being observed	Data collected from plants in a different time zone than the plant receiving the data is not being processed correctly. The Sample Cutoff Dates are not using UTC. TFS 15361 - Also delivered as a Hot Fix in v20.3.0.
Mirror Annot Function Issue	Annotations are not moving to the opposite side of the Image, causing crossed up leader lines. TFS 15360
Misspelled variable causes instant crash	When a misspelled variable, such as <code>~samp,date,%D/%M~</code> , is used in a Text or Table annotation, CM4Dc crashes. TFS 23571
Samples do not get reset between "Test Alignment" executions	After running Test Align in the Alignment setup, samples that were recomputed for the Alignment test are not being reset to their original values once the test run is complete. TFS 22910
Cannot see Ref Features in CM4D tree bar	Standard Reference Features (not Constructed Reference Features) are not showing up in the Data tree bar. TFS 22902
Some Internal scripts do not appear to end completely	When running an Internal Script, completed scripts are not being recognized as finished. Status does not show that the script has finished. TFS 22869
A constructed feature can lock up if samples not found	When attempting to load Selected Samples for Constructed Features, and those samples cannot be found in the database, CM4D locks up. TFS 24012
Cannot use Subroutine Features as a Construction Reference Feature	When selecting Reference Features for a Constructed Feature, Subroutine Features are not available. TFS 22903
Editing a View that contains Constructed Features crashes	When Feature Marker Text is enabled on a View and that View contains Constructed Features (such as Range), putting the view into Edit Mode crashes CM4D. TFS 14429
The DataSet statistics variable <code>~siftrule,n&gt;1,cpk~</code> is not resolving properly.	The parameter for the name of the Sift Rule is not resolving correctly. TFS 22335 - Also delivered as a Hot Fix in v17.5.1.
Enable sorting on the Features list in the Feature Selector	In the Feature Select dialog, clicking on the column headers does not sort the list of Features by that column. TFS 23727
Routine properties dialog Apply button	In the Routine Properties dialog, the Apply button is always disabled. <i>Solution: Removed non-functional button.</i> TFS 24239

Corrected item	What it means
Routine Properties dialog has an obsolete note	There is the Note That everything is updated to the database once you click OK, but the Updates Pending flag still appears on the DataSource. <i>Solution:</i> Note has been removed from the dialog, as changes are updated to the Database when Update to Database is performed. TFS 24241
Printed Reports have green bar (background)	When PDFs are printed, the green "desktop" behind the white Sheet area is being printed on the top and bottom of reports. TFS 24268 - Also delivered as a Hot Fix in v20.4.3.
CM4D crash when pushing features selected in a view into a reference feature	When features are selected in a View and then the menu item "Push Features to Reference" is used, CM4D crashes. TFS 24505
CM4D error log size gets maxed out causing crash	The *.err files do not get removed/replaced when a file size limit is reached, causing crashes. <i>Solution:</i> See the Logging enhancements section on page 32. TFS 24551
Scripts size limit should be Increased	CM4D Scripts are limited to 30000 bytes. This is proving to be too small. <i>Solution:</i> Extend limit 100,000 bytes. If scripts are larger than that, they must be split into script modules. TFS 24819
Embedded Paths "fill" function not applying	When editing the "Embedded Paths" grid for "Annot Load Filenames", if you use the "fill" function, the grid updates properly, but the change is not applied to the annotation. If you re-enter the grid, the settings are the same as before. TFS 25782
Feature properties dialog does not handle restricted filters properly.	In the Feature Properties dialog, the option to change Feature Filter values allows you to type in a value even if the filter is Restricted (should be a dropdown list). TFS 27081
Assign Cause does not use change log	When using "Assign Cause" to mask data, the "Change Log Comment" window does not appear and we do not have ability to trace who made changes. TFS 12993
Cannot Delete Process Change Log Comment	Delete log comment entry in Process Change Log Viewer does not work. TFS 27846
Long Query Resolve Times	Takes long time to open/load database when creating Queries. <i>Solution:</i> Removed multiple extraneous resolves to improve load times. TFS 27842

## CM4D Interactive

Corrected item	What it means
The Sticky Report toolbar is missing from the View/Customize menu	The ReportTweak toolbar (used for Sticky reports) is missing from the View/Customize menu so that cannot be re-enabled if it has been closed. TFS 23586
Issue with ~nom,label~	When used as a User-defined Row Variable in the Report Properties, the variable ~nom,label~ will not resolve in the DataSet grid. TFS 24145
Removing graphics from Routine causes instant crash	When an image is deleted from a Routine, CM4D instantly crashes. TFS 22287 - Also provided as a Hot Fix in v20.4.3.
Mis-click in CM4Di NavTree can cause heavy reload	Double-clicking anywhere in the yellow area would load whatever what highlighted. This causes heavy re-load times if the wrong node was highlighted. <i>Solution:</i> The action of a click will now only be triggered when a node/item is clicked directly. This same principle applies to CM4D Classic as well. TFS 27083
The grid settings in the Cm4d.ini file are being ignored	The settings in the Cm4d.ini file for the grid defaults are not being read when CM4Di loads. <i>Solution:</i> The order of the sections of the ini file were the issue, so a new default ini file will be provided with this release. TFS 22314, 22315, 22317
CM4Di tree terminology	Terminology in CM4Di tree does not match CM4D Classic TFS 27080

## DataSmith

Corrected item	What it means
Cannot add Reference Features via DataSmith	Assigning the Reference Feature association does not put anything into the database. TFS 22911
Mangle does not handle the tilde character	When the result of the Mangle function needs to be a variable (for example, a user variable to prefix the server name on the image file name), DataSmith does not handle the tilde character properly. <i>Solution:</i> The variable ~tilde~ has been added to the list of resolvable variables in DataSmith. To have a variable in the Mangle function, use the format ~tilde~variable~tilde~ to pass the result of ~variable~ into the database. TFS 27082

## DataSmithBatch

Corrected item	What it means
DataSmith Batch and Scheduler Job Processing issue(s)	When two files are placed in the Inbox at the same time and for the same Sample, the data from one of the two files does not show up in the database. TFS 22324 – Also delivered as a Hot Fix in v17.5.

Corrected item	What it means
DataSmithBatch is not creating Subroutines	Translators that would create Subroutines when run manually through DataSmith would not create those Subroutines when run through DataSmith Batch. TFS 27931
If disconnected from the Site, DataSmithBatch does not recover	If the Site connection was lost, the connect was never restored but Batch would keep trying to process files, and would end up sending everything to the error box. The Batch service would need to be restarted manually. <i>Solution: If the Site connection is disrupted, any files currently being processed will be sent to the errorbox. Then Batch will stop trying to process new data files and go into a "wait mode". A periodic check (set Retry Interval) will be done until the Site connection has been re-established, and then Batch will return to processing files. A Batch Service restart will not be required.</i> TFS 27930

### DataUtility

Corrected item	What it means
Replicate Routine - LSL value not correct (all positive)	When using the Replicate Routine function in Data Utility all the information copies over correctly, except the Feature Description and the Lower Spec & Reasonable Limits. TFS 12986

### Licensing

Corrected item	What it means
Remove requirement for Server license from Launcher launched clients	CM4D Scheduler client and CM4D Web client should not consume a Server license. TFS 25189

### Services

Corrected item	What it means
DataSmith Batch and Scheduler Job Processing issue(s)	Two data files with in the same sample in the same routine put into the Inbox at the same time could result in some of the information not processing correctly. TFS 22324

## Known Issues

The following are minor known issues that you will want to be aware of. These issues will either be addressed in a subsequent patch release, or are part of an on-going investigation to develop a solution.

### 1. CM4D Classic

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1. Deleting a Managed SheetSet from a Managed Document does not remove the SheetSet from Managed Reports in CM4D Web.

TFS 28240

Workaround: Before deleting a Managed SheetSet, unmanaged the SheetSet, save your Managed Document, then delete the SheetSet.

2. Process Change Log Viewer issues:

- a. After clicking Print to File, clicking Modify results in a crash.

TFS 33905

Workaround: Make sure a log entry is selected from the list before clicking Modify.

- b. After entering a User Defined log, the entry does not appear in the list after doing a new search.

Workaround: Close the Log Viewer and reopen it to see the new User Defined entry.

### 2. Windows 8/10 Graphics

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There are some known drawing issues in CM4D on Windows 8 and Windows 10 machines. This is not CM4D version specific, and we will continue work on getting a proper solution.