

ATS cm4d[®]

What's New in v21

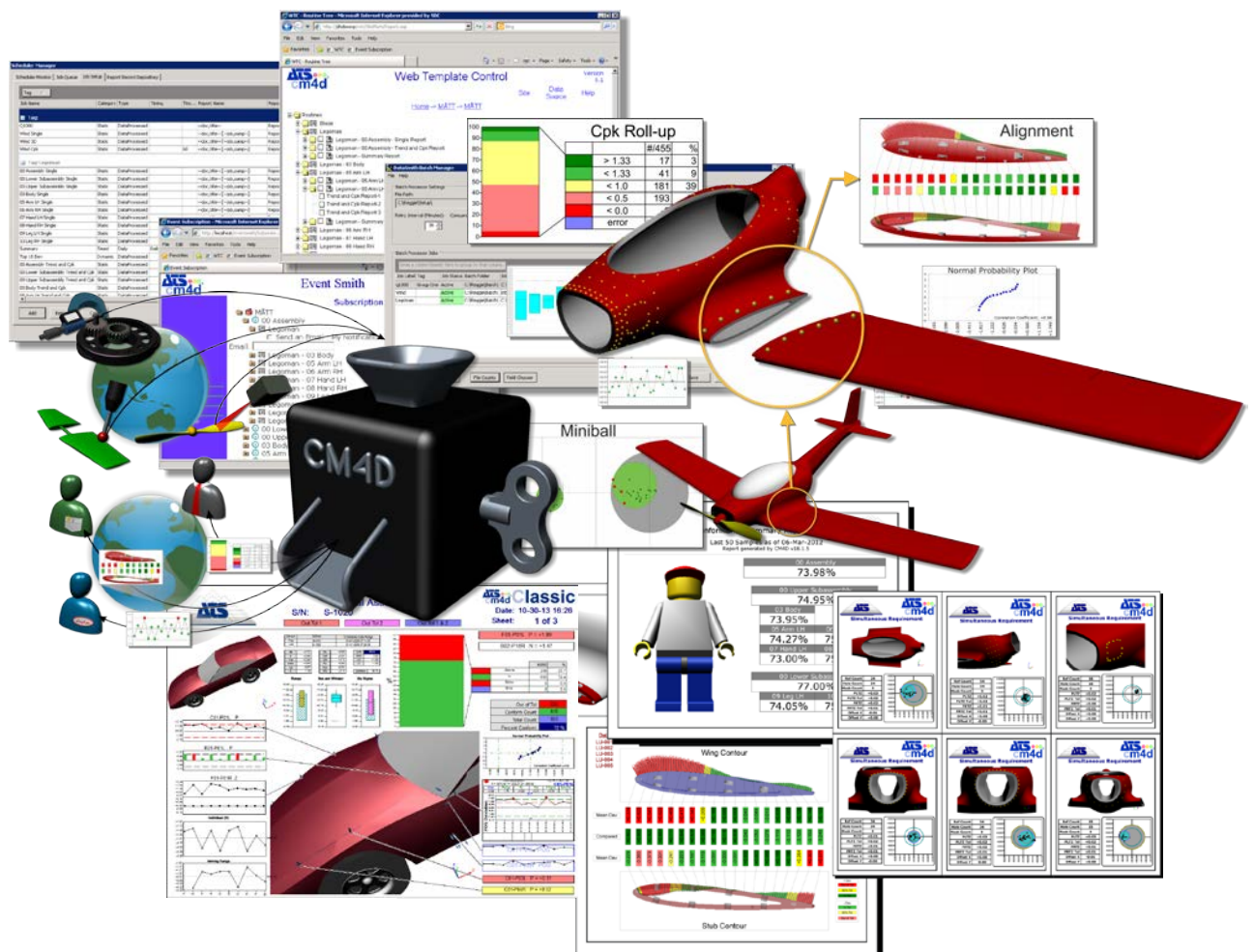


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v21.0.0

General Notes

- Build Date: October 14 2015
- Schema Version: 21a/21a
- ATS Licensing Version: 2.1
- CM4D Web v21.100.0.14

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

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

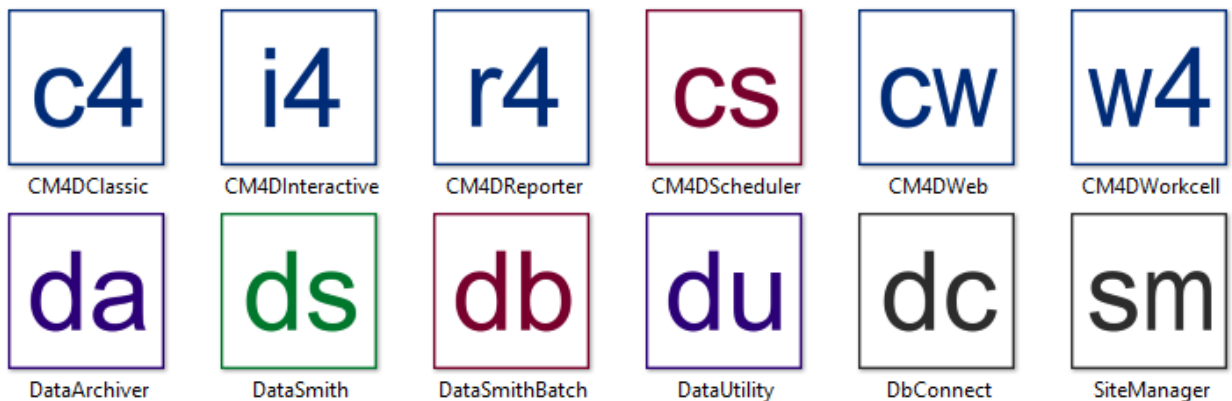
A new version of ATS Licensing has been released that will need to be used with v21 of ATS CM4D. The new ATS Licensing Server version includes some new features:

- 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 17.

New Features

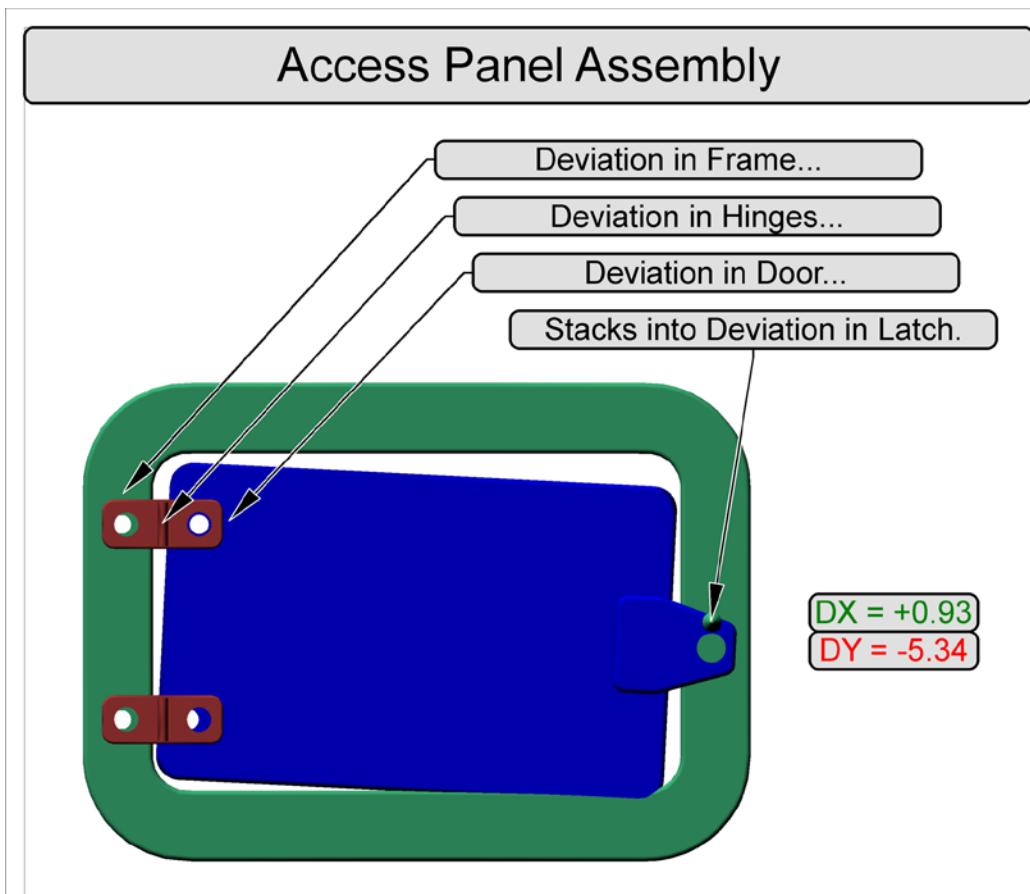
CM4D Classic

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

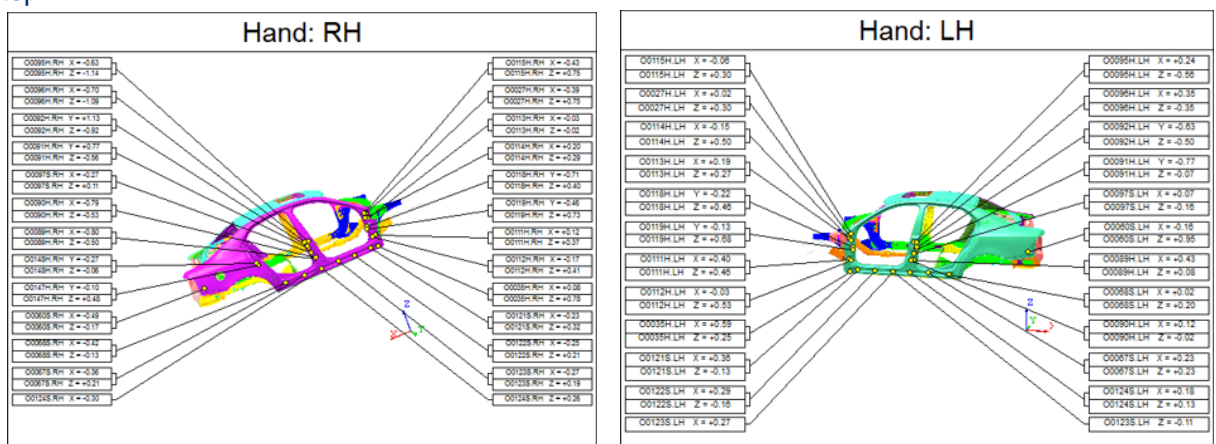
PNG and GIF image types are now available in different areas of CM4D output.

- **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:

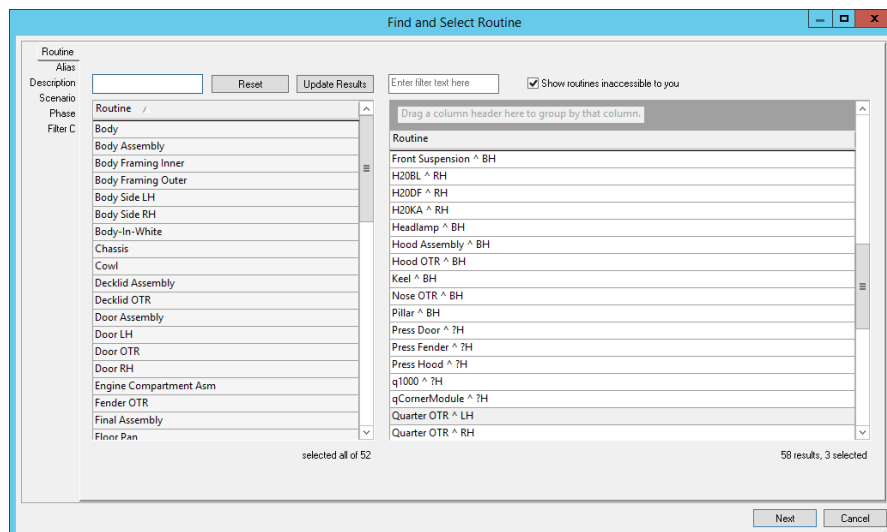
- **Label Match** - Features have the same label.
- **Label Similar** - Feature Labels are the same except for an 'L' or 'R' at the beginning or end of a Feature label. For example, if a feature in the document has a label that begins with an 'L', then we will look for a matching feature label that begins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



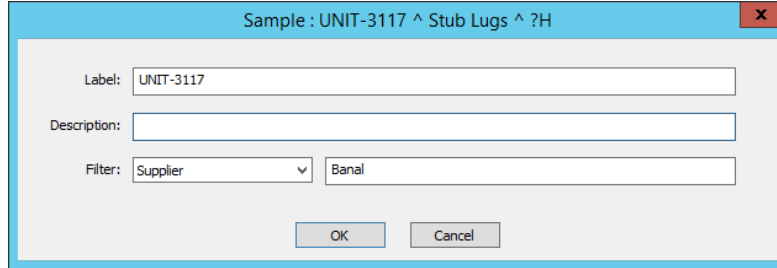
The first time you attempt to load a Routine, you will be prompted to configure the Routine Selector. The configuration settings (**File > Routine Selection Settings**) may be saved as Public, for a particular Group, or for the current User.

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

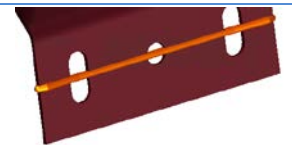
Changes made to the size and position of the Managed Document Selector will be remembered for each User. This will be saved in the Site database.
TFS 22830

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 ≤ 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:

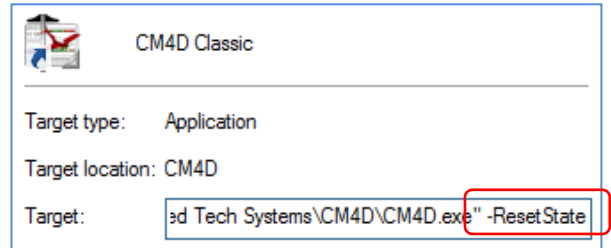
- **Number of Sift Rule** - the integer that indicates the position of Sift Rule in the list, as it appears in the Multiple Sift Rules dialog.
- **Label of Sift Rule** - label of Sift Rule.

	<p>Example using Number: <code>~siftrule, 3, mean~</code></p>
	<p>Example using Label: <code>~siftrule, Surf H/L, mean~</code></p>

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

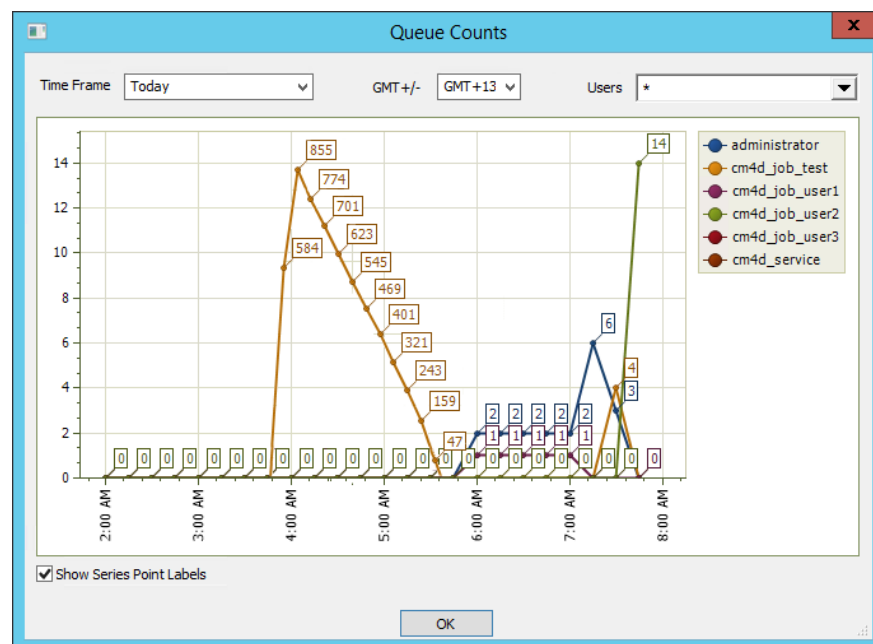
27. Filter Scheduler Manager

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.

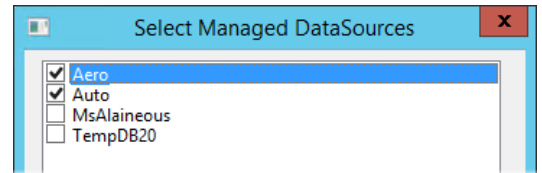
TFS 18747

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 12) 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

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

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 - This fix was 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>1,cpk~</code> is not resolving properly.	The parameter for the name of the Sift Rule is not resolving correctly. TFS 22335
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 - This fix was also provided 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 enhancements section on Logging . 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 - This fix was 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 – This fix was 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 be addressed in a subsequent patch release.

v21 Migration

1. 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

Solution: Before running the migration, make sure that if you are using Report Name Prefixes in your migration map file that you always include the trailing backslash.

2. Changing a Depository Label in the Migration Map file, but not the Depository Path, results in a legacy duplicate depository. Any existing reports will be moved and the database record updates correctly to use the new Depository Label, but in the Report Depository tab in Scheduler Manager there appears to be two Depositories that have the same path.

TFS 28350

Solution: Do not edit Depository Labels in the migration map file.

Workaround: After migration, go into Scheduler Manager and either delete the old Depository or change the old Depository Path to a new folder.

CM4D Classic

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.

CM4D Web

1. CM4D Web users have access to all Reports in a Site database.
2. 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