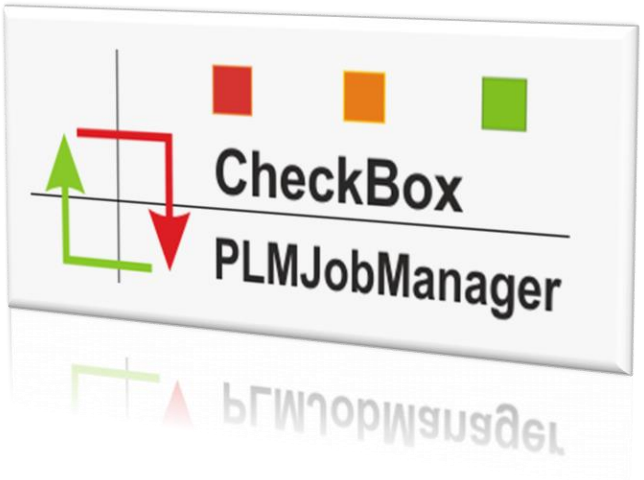
* CheckBox *



PLMJobManager - CheckBox User Docu: ‚Setup‘ and ‚Usage‘

Erstellt von: Josef Feuerstein

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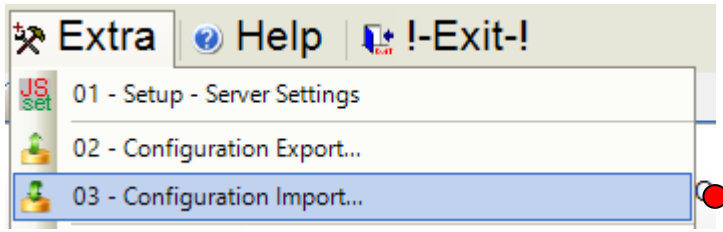
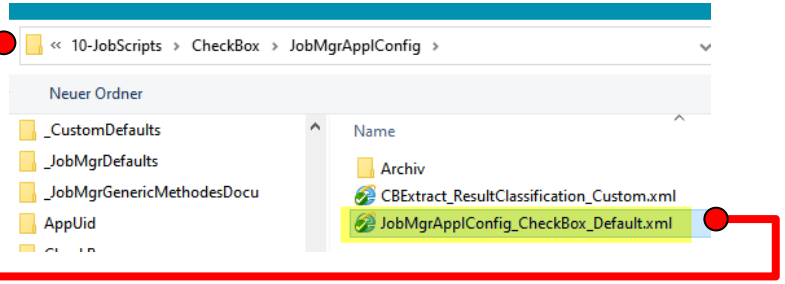
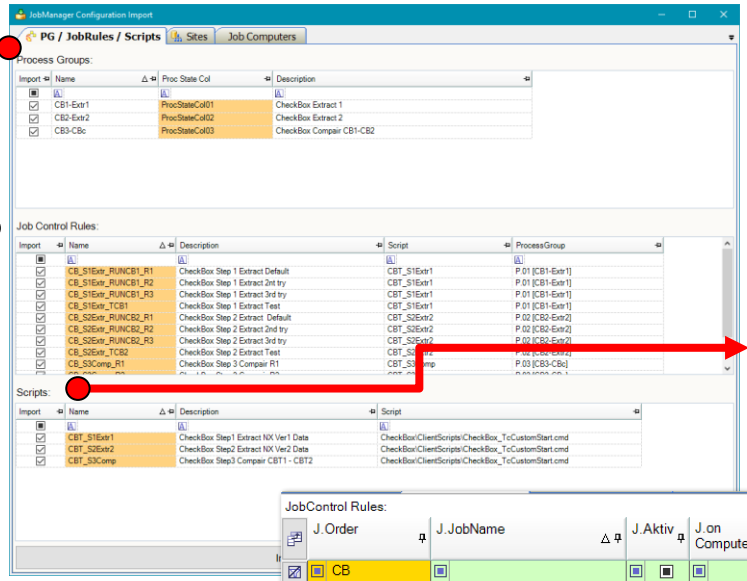
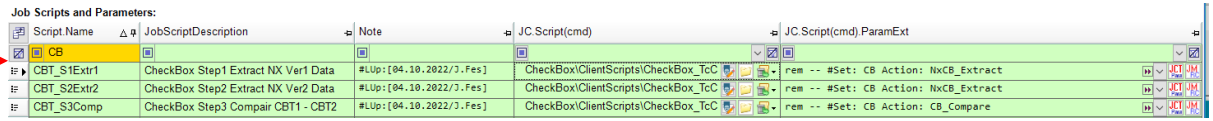
CheckBox: Import Default settings into JobManager

Import Settings









Job Scripts and Parameters:

Script.Name	JobScriptDescription	Note	JC.Script(cmd)	JC.Script(cmd).ParamExt
CB				
CBT_S1Extr1	CheckBox Step1 Extract NX Ver1 Data	#LUp:[04.10.2022/J.Fes]	CheckBox\ClientScripts\CheckBox_TcC	rem -- #Set: CB Action: NxCB_Extract
CBT_S2Extr2	CheckBox Step2 Extract NX Ver2 Data	#LUp:[04.10.2022/J.Fes]	CheckBox\ClientScripts\CheckBox_TcC	rem -- #Set: CB Action: NxCB_Extract
CBT_S3Comp	CheckBox Step3 Compair CBT1 - CBT2	#LUp:[04.10.2022/J.Fes]	CheckBox\ClientScripts\CheckBox_TcC	rem -- #Set: CB Action: CB_Compare

JobControl Rules:

J.Order	J.JobName	J.Aktiv	J.on Computers	Note	J.Description	PGr.	J.Script/Para	P.Stat(N,M,A)	J.Packet size
CB									
CB3.Extr3	CB_S1Extr_RUNCB1_R1	☑	*	#Ver:[04.10.2022]	CheckBox Step 1 Extract Default	P.01 [CB1-Extr1]	CBT_S1Extr1	RUN.CB1.1 (1st try Extr.NXPre//Prio:N)	10
CB3.Extr2	CB_S1Extr_RUNCB1_R2	☑	*	#Ver:[04.10.2022]	CheckBox Step 1 Extract 2nt try	P.01 [CB1-Extr1]	CBT_S1Extr1	RUN.CB1.2 (2nd try Extr.NXPre//Prio:1)	1
CB3.Extr1	CB_S1Extr_RUNCB1_R3	☑	*	#Ver:[04.10.2022]	CheckBox Step 1 Extract 3rd try	P.01 [CB1-Extr1]	CBT_S1Extr1	RUN.CB1.3 (3rd try Extr.NXPre//UpdFeature:NO//Prio:1)	1
CB3.ExtrT	CB_S1Extr_TCB1	☑	*	#Ver:[04.10.2022]	CheckBox Step 1 Extract Test	P.01 [CB1-Extr1]	CBT_S1Extr1	T.CB1 (Extr.NXPre)	1
CB2.Extr3	CB_S2Extr_RUNCB2_R1	☑	*	#Ver:[04.10.2022]	CheckBox Step 2 Extract Default	P.02 [CB2-Extr2]	CBT_S2Extr2	RUN.CB2.1 (1st try Extr.NXPost//Prio:N)	10
CB2.Extr2	CB_S2Extr_RUNCB2_R2	☑	*	#Ver:[04.10.2022]	CheckBox Step 2 Extract 2nd try	P.02 [CB2-Extr2]	CBT_S2Extr2	RUN.CB2.2 (2nd try Extr.NXPost//Prio:1)	1
CB2.Extr1	CB_S2Extr_RUNCB2_R3	☑	*	#Ver:[04.10.2022]	CheckBox Step 2 Extract 3rd try	P.02 [CB2-Extr2]	CBT_S2Extr2	RUN.CB2.3 (3rd try Extr.NXPost//UpdFeature:NO//Prio:1)	1
CB2.ExtrT	CB_S2Extr_TCB2	☑	*	#Ver:[04.10.2022]	CheckBox Step 2 Extract Test	P.02 [CB2-Extr2]	CBT_S2Extr2	T.CB2 (Extr.NXPost)	1
CB0.Comp2	CB_S3Comp_R1	☑	*	#Ver:[04.10.2022]	CheckBox Step 3 Compair R1	P.03 [CB3-CBc]	CBT_S3Comp	RUN.CB3.1 (1st Comp.CB1-2//Prio:N)	20
CB0.Comp1	CB_S3Comp_R2	☑	*	#Ver:[04.10.2022]	CheckBox Step 3 Compair R2	P.03 [CB3-CBc]	CBT_S3Comp	RUN.CB3.2 (2nd Comp.CB1-2//Prio:1)	5
CB0.CompT	CB_S3Comp_TCB3	☑	*	#Ver:[04.10.2022]	CheckBox Step 3 Compair Test	P.03 [CB3-CBc]	CBT_S3Comp	T.CB3 (Comp.CB1-2)	1

CheckBox: Defaults after import settings into JobManager

JobScripts and Parameters after Import

Job Scripts and Parameters:

Script.Name	JobScriptDescription	Note	JC.Script(cmd)	JC.Script(cmd).ParamExt
CB				
CBT_S1Extr1	CheckBox Step1 Extract NX Ver1 Data	#LUp:[04.10.2022/J.Fes]	CheckBox\ClientScripts\CheckBox_TcC	rem -- #Set: CB Action: NxCB_Extract
CBT_S2Extr2	CheckBox Step2 Extract NX Ver2 Data	#LUp:[04.10.2022/J.Fes]	CheckBox\ClientScripts\CheckBox_TcC	rem -- #Set: CB Action: NxCB_Extract
CBT_S3Comp	CheckBox Step3 Compair CBT1 - CBT2	#LUp:[04.10.2022/J.Fes]	CheckBox\ClientScripts\CheckBox_TcC	rem -- #Set: CB Action: CB_Compare

Edit Job Script

J.Script.Name: CBT_S1Extr1

J.Script.Description: CheckBox Step1 Extract NX Ver1 Data

JC.Script (cmd): CheckBox\ClientScripts\CheckBox_TcCustomStart.cmd

PartUpdate Parameters:

JC.Script (.cmd) | JS.Script (.net)

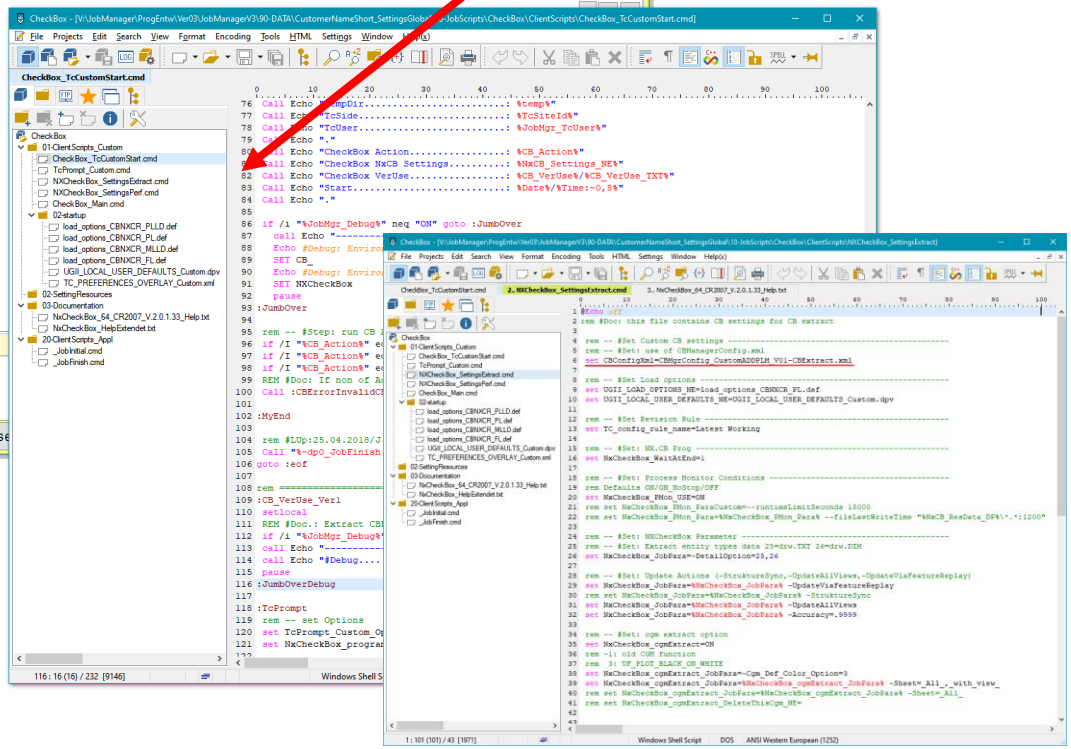
JC.Script (cmd) Parameters Extended

```
rem -- #Set: CB Action: NxCB_Extract
SET CB_Action=NxCB_Extract
rem -- #Set: Use of NXver
SET CB_VerUse=VER1
set CB_VerUse_TXT=NX12
```

Notes for this JobRule

```
#LUp:[04.10.2022/J.Fes]
```

Save | Save + Close | Cancel + Close



CheckBox: Defaults after import settings into JobManager

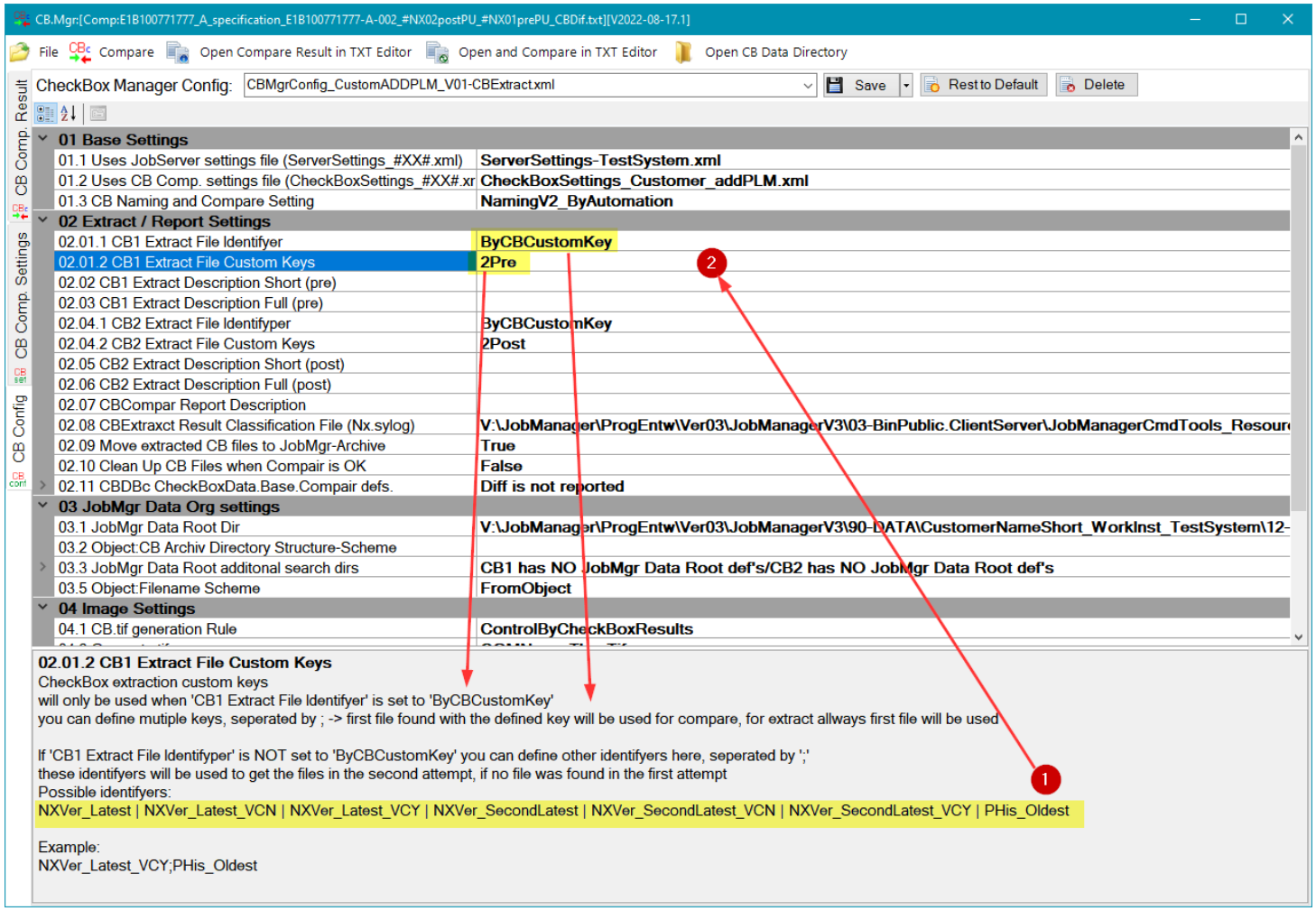
JobControl Rules after Import

JobControl Rules:

J.Order	J.JobName	J.Aktiv	J.on Computers	Note	J.Description	PGr:	J.Script/Para	P.Stat(N,M,A)	J.Packet size
CB									
CB3.Extr3	CB_S1Extr_RUNCB1_R1	☑	*	#Ver:[04.10.2022]	CheckBox Step 1 Extract Default	P.01 [CB1-Extr1]	CBT_S1Extr1	RUN.CB1.1 (1st try Extr.NXPre//Prio:N)	10
CB3.Extr2	CB_S1Extr_RUNCB1_R2	☑	*	#Ver:[04.10.2022]	CheckBox Step 1 Extract 2nt try	P.01 [CB1-Extr1]	CBT_S1Extr1	RUN.CB1.2 (2nd try Extr.NXPre//Prio:1)	1
CB3.Extr1	CB_S1Extr_RUNCB1_R3	☑	*	#Ver:[04.10.2022]	CheckBox Step 1 Extract 3rd try	P.01 [CB1-Extr1]	CBT_S1Extr1	RUN.CB1.3 (3rd try Extr.NXPre//UpdFeature:NO//Prio:1)	1
CB3.ExtrT	CB_S1Extr_TCB1	☑	*	#Ver:[04.10.2022]	CheckBox Step 1 Extract Test	P.01 [CB1-Extr1]	CBT_S1Extr1	T.CB1 (Extr.NXPre)	1
CB2.Extr3	CB_S2Extr_RUNCB2_R1	☑	*	#Ver:[04.10.2022]	CheckBox Step 2 Extract Default	P.02 [CB2-Extr2]	CBT_S2Extr2	RUN.CB2.1 (1st try Extr.NXPost//Prio:N)	10
CB2.Extr2	CB_S2Extr_RUNCB2_R2	☑	*	#Ver:[04.10.2022]	CheckBox Step 2 Extract 2nd try	P.02 [CB2-Extr2]	CBT_S2Extr2	RUN.CB2.2 (2nd try Extr.NXPost//Prio:1)	1
CB2.Extr1	CB_S2Extr_RUNCB2_R3	☑	*	#Ver:[04.10.2022]	CheckBox Step 2 Extract 3rd try	P.02 [CB2-Extr2]	CBT_S2Extr2	RUN.CB2.3 (3rd try Extr.NXPost//UpdFeature:NO//Prio:1)	1
CB2.ExtrT	CB_S2Extr_TCB2	☑	*	#Ver:[04.10.2022]	CheckBox Step 2 Extract Test	P.02 [CB2-Extr2]	CBT_S2Extr2	T.CB2 (Extr.NXPost)	1
CB0.Comp2	CB_S3Comp_R1	☑	*	#Ver:[04.10.2022]	CheckBox Step 3 Compair R1	P.03 [CB3-CBc]	CBT_S3Comp	RUN.CB3.1 (1st Comp.CB1-2//Prio:N)	20
CB0.Comp1	CB_S3Comp_R2	☑	*	#Ver:[04.10.2022]	CheckBox Step 3 Compair R2	P.03 [CB3-CBc]	CBT_S3Comp	RUN.CB3.2 (2nd Comp.CB1-2//Prio:1)	5
CB0.CompT	CB_S3Comp_TCB3	☑	*	#Ver:[04.10.2022]	CheckBox Step 3 Compair Test	P.03 [CB3-CBc]	CBT_S3Comp	T.CB3 (Comp.CB1-2)	1

CheckBox Settings

CheckBox Config



CheckBox Options parameter

```
Start of: CheckBox V2.0.2.33 (NX CR2007) <Build: > at Thu Jul 14 23:18:20 2022
-----------------------------------------------------------------------------------------------------------------------
Usage for Check Actions:
------------------------
CheckBox ...
-partList=<partlist>
-part=<partname>
-outdir=<outputdir>

[-log=<logfile>]
[-result=<resultfile>]
[-pim=yes]
[-u=<username> -p=<password> -g=<6]>]
[-TC_revision_rule_name=<revision Rule Name>
[-Action=<action1,...,action_n>]    example: -Action=ModelGetData,AssemblyGetData,DrawingGetData   (default: all Checks)
[-DetailOption=<All|{2,3,4,5,6,7,8,...}>
[-MaxAssemblyLevel=<-1|0|1|2|3|4|5|6|7|8,...}>  (default: all Levels) (-1=all Levels) Example: 2 means until level 2
[-UpdateAllFeatures]                --> feature replay
[-UpdateViaFeatureReplay]           --> set first feature and last feature
[-StruktureSync]                    --> assembly structure refresh
[-UpdateAllViews]                   --> update of drawing views
[-Sheet=<sheet1,...,sheetn>]        example: -Sheet=SHT1,SHT2  (default: all sheets, with view) keys: _All_,_with_view_
[-ExtractCGM_toDir=<dirname>]       example: -ExtractCGM_toDir=V:\cgm_dir
[-DrawingSnapShotCreate]            --> create CGM snapshots of all drawings (NX7.5ff) after update funcitons and with -SaveWorkPart Option
[-SaveWorkPart]                     --> Saves the workpart after checking
[-Accuracy=<accuracy>               --> Accuracy Value for Body mass property calculation (Default is .99
[-Cgm_Def_Color_Option={-1,0,1,2,3,4,5}]
                       -1: old CGM function (default)
                        0: UF_PLOT_AS_DISPLAYED_COLORS
                        1: UF_PLOT_PART_COLORS
                        2: UF_PLOT_CUSTOM_PALETTE_COLORS
                        3: UF_PLOT_BLACK_ON_WHITE
                        4: UF_PLOT_LEGACY_COLORS
                        5: UF_PLOT_COLOR_BY_WIDTH
[-TC_revision_rule_name="Working, Any Status"]

Example: CheckBox -log=c:\temp\mylog.txt  -outdir=c:\temp\refile -partList=r:\partlist.txt
Example: CheckBox -pim=yes -u=myaccount -p=mypassword -log=D:\mylog.txt  -outdir=X:\myldir  -partList=r:\partlist.txt
Example: CheckBox -pim=yes -u=mya -p=myp -log=D:\log.txt -partList=r:\list.txt -ExtractCGM_toDir=r:\cgm_dir -Sheet=_All_,_with_view_
Example: CheckBox -Cgm_Def_Color_Option=3 -log=r:\mylog.txt  -ExtractCGM_toDir=r:\cgm_dir -partList=r:\partlist.txt
Example: CheckBox -log=c:\temp\mylog.txt  -outdir=c:\temp\refile -partList=r:\partlist.txt -SaveWorkPart -DrawingSnapShotCreate -UpdateAllViews -
UpdateAllFeatures
-----------------------------------------------------------------------------------------------------------------------
```

CheckBox Options parameter

Environvariables:

```
* Set NXCB_outdir                = ##
* Set NXCB_DetailOption          = <All|{2,3,4,5,6,7,8,...}>
* Set NXCB_MAXASSEMBLYLEVEL      = -1 any 0,1,2,...

:: ---------------------------------------------------------------------
:: Callback Change Workpart set active triggers ==> CB1.xml Ausgabe
set CHECKBOX_CHANGE_WORKPART_ACTION=TRUE

:: Callback Save Callback set active triggers   ==> CB2.xml
set CHECKBOX_SAVE_CALLBACK_ACTION=TRUE
:: ---------------------------------------------------------------------

:: ---------------------------------------------------------------------
:: Neue Umgebungsvariablen für Löschen von Attributen und Linwidth
:: Callback Change Workpart sets CHECKBOX_CALLBACK_DeleteAttributes active
set CHECKBOX_CALLBACK_DeleteAttributes=TRUE
:: Callback Change Workpart sets CHECKBOX_CALLBACK_SetLineWidthPreferences active
set CHECKBOX_CALLBACK_SetLineWidthPreferences=TRUE
```

Interactive Only:

```
set NXCB_POSTCOMMAND            = #notepad#
Set NXCB_POSTCOMMAND            = start #notepad#
Set NXCB_POSTCOMMAND            = cmd/C start #notepad#
Set NXCB_POSTCOMMAND            = cmd/C start C:\ProgramPortable\PSPad editor\PSPad.exe
```

#Example:

```
set NXCB_outdir=S:\JobManagerV3_T\91-DATA.TempTransfer\CheckBoxInteractive
set NXCB_detail_option=25,26
```

#Planed Environvariables but not avilabel 06.10.2022

```
Set NXCB_ACTION               = ModelGetData,AssemblyGetData,DrawingGetData
Set NXCB_LOG                  = ##
Set NXCB_ExtractCGM_toDir     = ##
Set NXCB_Result               = ##
Set NXCB_UpdateAllFeatures    = True
Set NXCB_UpdateViaFeatureReplay = True
Set NXCB_StruktureSync        = True
Set NXCB_UpdateAllViews       = True
Set NXCB_Accuracy             = 0.9999
Set NXCB_Sheet                = [-Sheet=<sheet1,...,sheetn>] keys: _All_,_with_view_
```

CheckBox usage

Excerpt e-mail 09.06.2022 from Bernd Schieber

Here the version 2.0.1.32 with the CALLBACK functionality.
To run the callback you have to copy the respective dll into the directory udo.
udo must be below e.g. the %UGII_VENDOR_DIR%.

For the NATIVE callback you can use the batchscript drag_drop_part_utilities_NX1953.bat. This is in the zip file PART_UTILITIES.zip.
Here simply drop the part over the batch routine in the explorer.

Important: under TC the %NXCB_outdir% should always be set, because the directory is changed when running the part_utility program.

%NXCB_MAXASSEMBLYLEVEL% controls the maximum component depth of the components that are output.
Similarly,if the checkbox is called directly the switch is
-MaxAssemblyLevel=
Please note that this is case sensitive.

I tried the whole thing under NX1953 (Native)
and under NX1880 (with TC 12)

---------- German Version ----------
Auszug E-Mail 09.06.2022 von Bernd Schieber

Hier die Version 2.0.1.32 mit der CALLBACK Funktionalität.
Damit der Callback läuft musst Du die jeweilige dll in das Verzeichnis udo kopieren.
udo muss unterhalb z.B. des %UGII_VENDOR_DIR% liegen

Beim Aufruf unter NATIVE kannst Du Dich am Batchscript drag_drop_part_utilities_NX1953.bat orientieren. Das liegt im Zip File PART_UTILITIES.zip.
Hier einfach das Part über die Batch routine im explorer fallen lassen.

Wichtig: unter TC sollte das %NXCB_outdir% immer gesetzt werden, da das Verzeichnis beim durchlaufen des part_utility Programms gewechselt wird.

%NXCB_MAXASSEMBLYLEVEL% steuert die maximale Komponententiefe der Komponenten, die ausgegeben werden.
Analog ist das,wenn die Checkbox direkt aufgerufen wird das Switch
-MaxAssemblyLevel=
Bitte hier Gross und Kleinschreibung beachten.

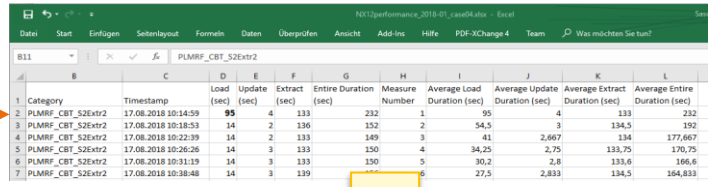
Ausprobiert habe ich das Ganze unter NX1953 (Native)
und unter NX1880 (mit TC 12)

CheckBox performance data recording

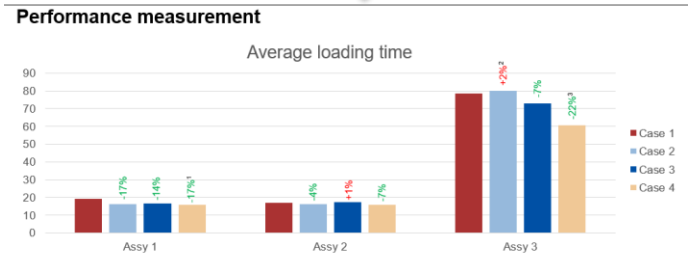
CheckBox in combination with PLMJobManager can also be used to record NX performance Data.
The Princip is that timestamps in CheckBox.xml files are used to harvest the performance data and to collect them into an Excel file. This Data can then be used to analyze the NX performance.

System Sketch

Result: extracted NX12 Data



	Category	Timestamp	Load (sec)	Update (sec)	Extract (sec)	Entire Duration (sec)	Measure Number	Average Load Duration (sec)	Average Update Duration (sec)	Average Extract Duration (sec)	Average Entire Duration (sec)
2	PLMRF_CBT_S2Extr2	17.08.2018 10:14:59	95	4	133	232	1	95	4	133	232
3	PLMRF_CBT_S2Extr2	17.08.2018 10:18:53	14	2	136	152	2	54,5	3	134,5	192
4	PLMRF_CBT_S2Extr2	17.08.2018 10:22:39	14	2	133	149	3	41	2,667	134	177,667
5	PLMRF_CBT_S2Extr2	17.08.2018 10:26:26	14	3	133	150	4	34,25	2,75	133,75	170,75
6	PLMRF_CBT_S2Extr2	17.08.2018 10:31:19	14	3	133	150	5	30,2	2,8	133,6	166,6
7	PLMRF_CBT_S2Extr2	17.08.2018 10:38:48	14	3	139	[illegible]	6	27,5	2,833	134,5	164,833

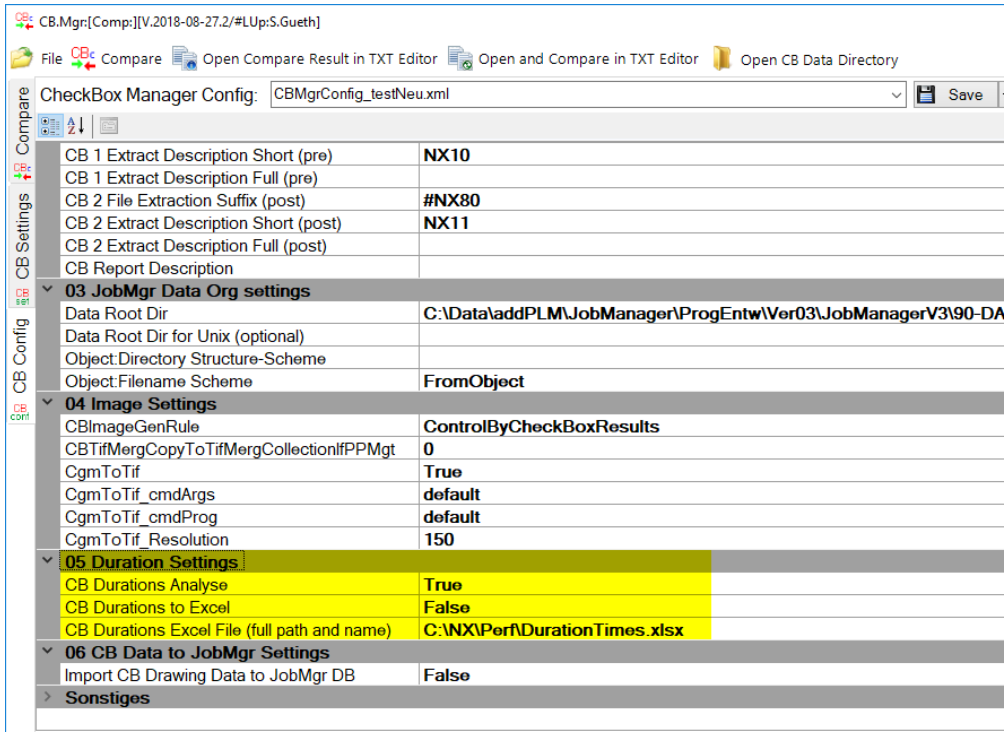


	Last saved with	NX version	TC@PLMRF	Load options
Case 1	NX10	NX10.0.3.5 MP18 / 18.1a / NX10_d	TC11.2.4.41 / 18.1.0.3 / SVN:50742	Partially Load – Lightweight display – WAVE all levels
Case 2	NX10	NX12.0.2.7 EAP / NX12_eap	TC11.2.4.41 / 18.1.0.3 / SVN:50742	Partially Load – Lightweight display – WAVE all levels
Case 3	NX10	NX12.0.2.9 MP0 / 18.2a / NX12_c	TC11.4.0.4 / 18.2.1.1-SNAPSHOT	Partially Load – Lightweight display – WAVE all levels
Case 4	NX12	NX12.0.2.9 MP0 / 18.2a / NX12_c	TC11.4.0.4 / 18.2.1.1-SNAPSHOT	Partially Load – Lightweight display – WAVE all levels

No.	Type	Description	Options
01	Load Duration	This is the time from opening a part until it is completely loaded	Load will be done with the settings of load environment
02	Update Duration	This is the time needed to run update actions at your part	Update feature Update Drawing views Update structure
03	CheckBox extract duration	This is the time CheckBox needs to read the CheckBox data from parts and write it into CbeckBox.xml file	NO
04	Entire Duration	Is the total amount of Load-, Update- and CheckBox extract- duration	NO

CheckBox performance data recording

You can enable and configure the CheckBox NX performance data recording in the CheckBox Settings manager → CB Config → 05 Duration Settings



- **CB Durations Analyse** — If set to true, the duration for load, update, extract and the entire duration of the cb extract of each part file will be parsed from extracted xml file
- **CB Durations to Excel** — If set to true, an excel file will be generated, where all CheckBox duration times will be collected
- **CB Durations Excel File** — defines the excel file name where all the duration times should be collected

CheckBox performance data recording

Technical Details

1.. 56000001173607_A2_master_56000001173607-a2_#NX12027MP00.xml — Extracted CB XML File

```
 3  <ProgramData>
 4   <ProgramName>NxCheckBox</ProgramName>
 5   <ProgramRelease>V2.0.1.21 (NX 12)</ProgramRelease>
 6   <BuildDate>(Nov 15 2017)</BuildDate>
 7   <CustomLicense>unknown</CustomLicense>
 8  </ProgramData>
 9  <RunData>
10   <StartLoadPartDateTime>2018-08-17 12:38.22</StartLoadPartDateTime>   (1)
11   <EndLoadPartDateTime>2018-08-17 12:38.54</EndLoadPartDateTime>   (2)
12   <StartLoadPartMemoryAllocation>-1078884</StartLoadPartMemoryAllocation>
13   <EndLoadPartMemoryAllocation>-1900988</EndLoadPartMemoryAllocation>
14   <Action></Action>
15   <DetailOption>25,26</DetailOption>
16   <StartUpdateDateTime>2018-08-17 12:38.54</StartUpdateDateTime>   (4)
17   <UpdateAllFeaturesReturnValue>0</UpdateAllFeaturesReturnValue>   (5)
18   <StructureSyncReturnValue>0</StructureSyncReturnValue>
19   <UpdateAllViewsReturnValue>0</UpdateAllViewsReturnValue>
20   <EndUpdateDateTime>2018-08-17 12:38.56</EndUpdateDateTime>
21   <StartDateTime>2018-08-17 12:38.56</StartDateTime>   (7)
22  </RunData>
23  <NxData>
2370  <RunDataPerformance>
2371   <EndDateTime>2018-08-17 12:41.11</EndDateTime>   (8)
2372  </RunDataPerformance>
2373 </PLMJobManager_CheckBoxData>
2374
```

EndLoadPartDateTime (2)
–
StartLoadPartDateTime (1)
= Load (sec) (3)

EndUpdateDateTime (5)
–
StartUpdateDateTime (4)
= Update (sec) (6)

EndDateTime (8)
–
StartDateTime (7)
= Extract (sec) (9)

Entire Duration (10) =
Load (3) + Update (6) + Extract (9)

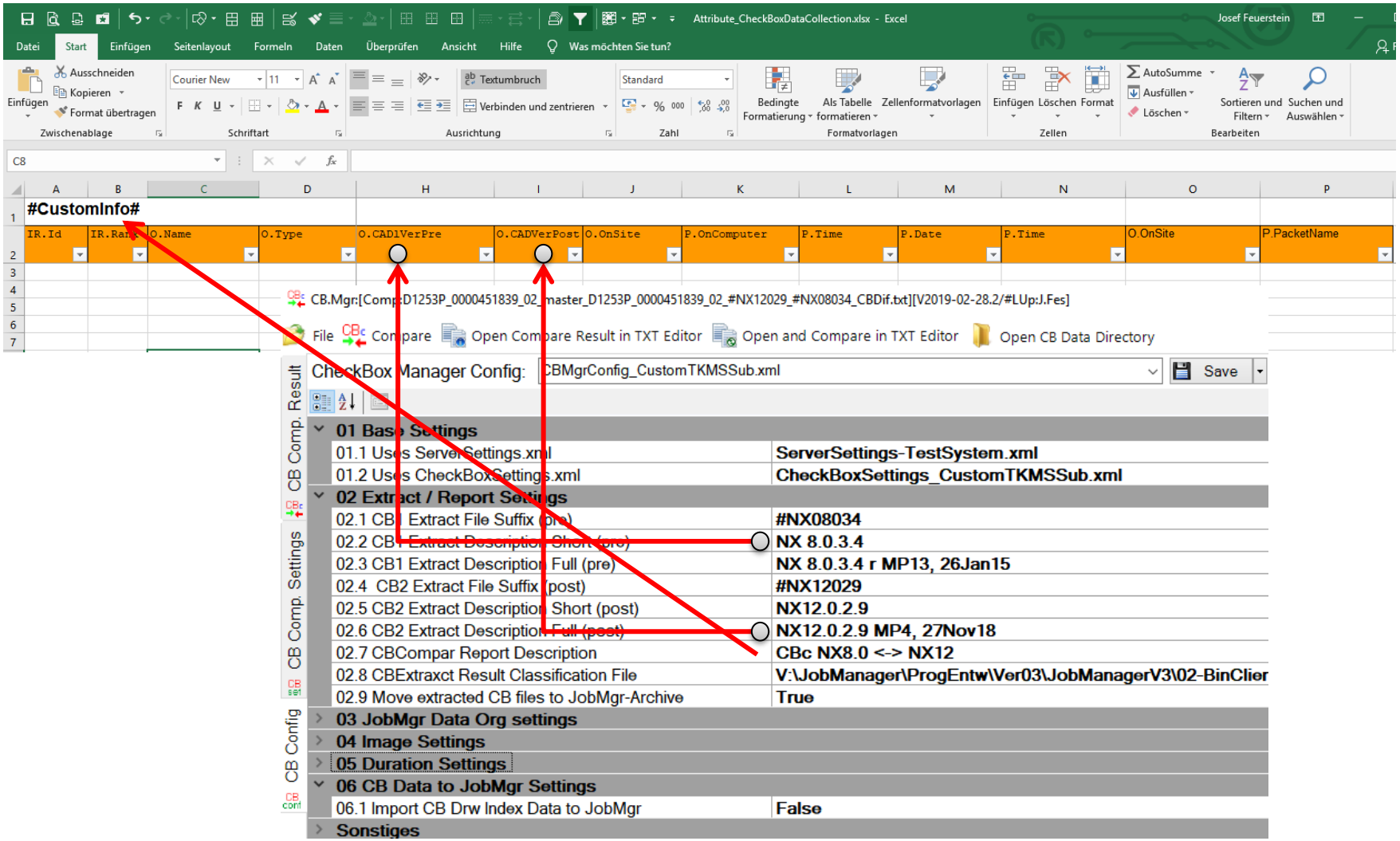
NX12performance_2018-01_case04.xlsx - Excel

ID (14)	Category (11)	Timestamp	Load (sec) (3)	Update (sec) (6)	Extract (sec) (9)	Entire Duration (sec) (10)	Measure Number (12)	Average Load Duration (sec) (13)	Average Update Duration (sec) (13)	Average Extract Duration (sec) (13)	Average Entire Duration (sec) (13)
56000001173607/A2/master/56000001173607-a2	PLMRF_CBT_S2Extr2	17.08.2018 10:14:59	**95**	4	133	232	1	95	4	133	232
56000001173607/A2/master/56000001173607-a2	PLMRF_CBT_S2Extr2	17.08.2018 10:18:53	14	2	136	152	2	54,5	3	134,5	192
56000001173607/A2/master/56000001173607-a2	PLMRF_CBT_S2Extr2	17.08.2018 10:22:39	14	2	133	149	3	41	2,667	134	177,667
56000001173607/A2/master/56000001173607-a2	PLMRF_CBT_S2Extr2	17.08.2018 10:26:26	14	3	133	150	4	34,25	2,75	133,75	170,75
56000001173607/A2/master/56000001173607-a2	PLMRF_CBT_S2Extr2	17.08.2018 10:31:19	14	3	133	150	5	30,2	2,8	133,6	166,6
56000001173607/A2/master/56000001173607-a2	PLMRF_CBT_S2Extr2	17.08.2018 10:38:48	14	3	139	156	6	27,5	2,833	134,5	164,833
56000001173607/A2/master/56000001173607-a2	PLMRF_CBT_S2Extr2	17.08.2018 10:42:35	14	2	134	150	7	25,571	2,714	134,429	162,714

Average Times (13) of same **ID (14)** and **Category (11)** in combination with **Measure Number (12)**

CheckBox performance data recording

Technical Details
Template .\JobManagerV3\03-BinPublic.ClientServer\JobManagerCmdTools_Resources\CBTemplate



Glosar

No	SORT	Long	Desctription	Notes	Dates
01	GVP	Geometrische Validation Properties	Definiert welche der MP Daten die Geometrischen Daten beinhaltet.	LOTAR Definition	#New: 5.4.2013
02	MP	Massproperties	Die Massproperties umfassen die zu prüfenden Daten wie z.B. 3D SoldiBodys Attribute	Begriff von MTU	#New: 5.4.2013