



Detector Thin Client

Version 1.2.2.0 Release Notes

Version	Name	Remarks	Date
1.0.0	Adi Brill	Final Document	2021.02.07



1. Variable Fixed Detector Calibration Screen

The variable fixed calibration screen allows finding the optimal delay time for the current detector.

Alarm Type	Detector Key	Active	Delay before trigger	Delay after oper change	Delay after last event close
NODATA	*	1	122	0	0
DYNAMIC_CHANGE_RARE	*	1	30	15	15
BAD_SIMILARITY	*	1	30	15	13
NO_SIMILARITY	*	1	30	5	5
VAR_ROC	CL	1	5	0	10
VAR_ROC	pH	1	5	0	10
VAR_ROC	TU	1	5	0	10
VAR_LONG_TREND	CL	1	60	0	60
VAR_LONG_TREND	pH	1	60	0	60
VAR_LONG_TREND	TU	1	60	0	60
VAR_FIXED	CL	1	315	15	15
VAR_FIXED	LT	1	1440	15	15
VAR_FIXED	pH	1	1440	15	15
VAR_FIXED	TU	1	1440	15	15
VAR_OUT_OF_STATISTICAL_LIMITS	CL	1	60	15	15
VAR_OUT_OF_STATISTICAL_LIMITS	pH	1	15	15	15
VAR_OUT_OF_STATISTICAL_LIMITS	PR_Out	1	1440	15	15
VAR_OUT_OF_STATISTICAL_LIMITS	TU	1	15	15	15
VAR_OUT_OF_USER_LIMITS	CL	1	15	15	15
VAR_OUT_OF_USER_LIMITS	FL	1	1440	15	15
VAR_OUT_OF_USER_LIMITS	LT	1	1440	15	15
VAR_OUT_OF_USER_LIMITS	pH	1	15	15	15
VAR_OUT_OF_USER_LIMITS	PR_Out	1	1440	15	15

Filter detectors by variables

Activate filter by variable names

- CL
- TU
- pH
- PR
- FL
- LT
- PR_Out

Filter detectors by type

Activate filter by detector types

- NO_ALARM
- VAR_OUT_OF_USER_LIMITS
- VAR_OUT_OF_STATISTICAL_LIMIT
- VAR_FIXED
- VAR_LONG_TREND
- VAR_ROC
- RULE_VIOLATION
- NO_SIMILARITY
- BAD_SIMILARITY
- DYNAMIC_CHANGE_RARE
- DYNAMIC_CHANGE_BAD

Show only active alerts

Show learning result

Double click on the relevant detector to open the detectors screen or click the edit button.



Detector Policy Editor

Detector type: VAR_FIXED

Detector key: CL Active

Delay before trigger (min): 315

Delay after operational change (min): 15

Delay after last event close (min): 15

Notification policy: 0 - Every trigger

Base severity: 2 - MEDIUM

Block On Rule: []

Block Off Rule: []

Info

```
User Low.....:0.20
User High.....:0.80
Statistical Low.:0.22
Statistical High.:0.71
Average.....:0.42
Median.....:0.43
STD.....:0.08
```

History of changes

```
2021-02-01 12:01:59
2018-02-20 08:02:13
2017-06-19 13:35:01
2017-06-13 10:50:13
```

Name	Value

Detector performance

TP	FP	FN	NC	OT+IG
0	0	0	0	0

Events date range: From:2020/01/01 00:00:00 to:2020/04/23 15:18:57

Last calculation: 0001-01-01 00:00:00

The calibration screen is available from this button.



The variable fixed calibration screen contains only one control. The delay time controls. It is possible to control the delay time interval, maximum and minimum after you have selected start and end date.

Bayit_Vagan () Detector Calibration Assistance

Detector **VAR FIXED** Key **CL**

Parameters for calibration

Name	Current value

Start date: 2020/02/08 16:03:15 End date: 2021/02/07 16:03:15

Rows Delay time (Min): 315 Delay time (Max): 120 Delay time interval: 15

Performance chart

Bottom navigation: [Clipboard] [Checkmark] [EXIT]



Click on the "Run" button to see the results of the calibration analysis. A progress bar will show on the screen. You can stop the process at any time by clicking the cancel button. Exiting the screen is from the button labeled "exit".

Gilo (CL) Detector Calibration Assistance

Detector VAR OUT OF STATISTICAL LIMITS **Key** CL


Parameters for calibration

Name	Current value	Start date	End date
Stat Min	0.225	2020/01/12 17:38:12	2021/01/11 17:38:12
Stat Max	0.632		

Rows Delay time (Min) 15 Delay time (Max) 120 Delay time interval 15

Columns Percentage Max 50 Percentage Interval 5

Performance chart

Delay Time	0%	5%	10%	15%	20%	25%	30%	35%
<div style="border: 2px solid red; padding: 10px; width: fit-content; margin: 0 auto;"> <p>Progress Indicator</p>  <p>Delay Time: 15/120 Percentage: 50/50</p> </div>								

The table will show the results for each delay time. If you would like to modify the detector according to a certain result, click on your selected cell and then click the tick button. This calibrator will display events' count where the variable had a fixed value.



To keep the parameters for this detector click the wanted cell and then click the tick button.

Gilo (CL) Detector Calibration Assistance

Detector **VAR OUT OF STATSTICAL LIMITS** Key **CL**

Parameters for calibration

Name	Current value
Stat Min	0.225
Stat Max	0.632

Start date: 2020/01/12 17:38:12 End date: 2021/01/11 17:38:12

Rows: Delay time (Min) 15 Delay time (Max) 120 Delay time interval 15

Columns: Percentage Max 50 Percentage Interval 5

Performance chart

Delay Time	0%	5%	10%	15%	20%	25%	30%	35%
15	52	70	120	53	11	9	11	9
30	32	38	48	23	6	3	3	4
45	24	29	29	14	4	3	3	4
60	21	20	19	10	3	3	2	2
75	17	18	17	7	2	2	2	2
90	17	16	12	6	2	2	2	2
105	17	14	12	6	2	2	2	2
120	14	11	10	5	1	1	1	1

Navigation icons: Home, **Tick**, Exit



After you confirm, the following fields will be updated with the new values. To save these settings, click on the tick again. You must ensure that the model is in PAUSE state in order to save the new settings.

Detector Policy Editor

Detector type: VAR_FIXED

Detector key: CL

Delay before trigger (min): 315

Delay after operational change (min): 15

Delay after last event close (min): 15

Notification policy: 0 - Every trigger

Base severity: 2 - MEDIUM

Block On Rule: [Empty]

Block Off Rule: [Empty]

Active

Info

```
User Low.....:0.20
User High.....:0.80
Statistical Low.:0.22
Statistical High.:0.71
Average.....:0.42
Median.....:0.43
STD.....:0.08
```

History of changes

```
2021-02-01 12:01:59
2018-02-20 08:02:13
2017-06-19 13:35:01
2017-06-13 10:50:13
```

Name	Value

Detector performance

TP	FP	FN	NC	OT+IG
0	0	0	0	0

Events date range: From:2020/01/01 00:00:00 to:2020/04/23 15:18:57

Last calculation: 0001-01-01 00:00:00

Buttons: [Checkmark] [EXIT] [Print] [Gauge]



2. Rate of Change Detector Calibration

The Rate of Change calibration screen allows finding the optimal difference value between periods and the optimal time window for average calculation for the current detector.

Alarm Type	Detector Key	Active	Delay before trigger	Delay after oper change	Delay after last event close
NODATA	*	1	122	0	0
DYNAMIC_CHANGE_RARE	*	1	30	15	15
BAD_SIMILARITY	*	1	30	15	13
NO_SIMILARITY	*	1	30	5	5
VAR_ROC	CL	1	5	0	10
VAR_ROC	pH	1	5	0	10
VAR_ROC	TU	1	5	0	10
VAR_LONG_TREND	CL	1	60	0	60
VAR_LONG_TREND	pH	1	60	0	60
VAR_LONG_TREND	TU	1	60	0	60
VAR_FIXED	CL	1	315	15	15
VAR_FIXED	LT	1	1440	15	15
VAR_FIXED	pH	1	1440	15	15
VAR_FIXED	TU	1	1440	15	15
VAR_OUT_OF_STATISTICAL_LIMITS	CL	1	60	15	15
VAR_OUT_OF_STATISTICAL_LIMITS	pH	1	15	15	15
VAR_OUT_OF_STATISTICAL_LIMITS	PR_Out	1	1440	15	15
VAR_OUT_OF_STATISTICAL_LIMITS	TU	1	15	15	15
VAR_OUT_OF_USER_LIMITS	CL	1	15	15	15
VAR_OUT_OF_USER_LIMITS	FL	1	1440	15	15
VAR_OUT_OF_USER_LIMITS	LT	1	1440	15	15
VAR_OUT_OF_USER_LIMITS	pH	1	15	15	15
VAR_OUT_OF_USER_LIMITS	PR_Out	1	1440	15	15

Double click on the relevant detector to open the detectors screen or click the edit button.



The calibration screen is available from this button

Detector Policy Editor

Detector type: VAR_ROC

Detector key: CL Active

Delay before trigger (min): 5

Delay after operational change (min): 0

Delay after last event close (min): 10

Notification policy: 0 - Every trigger

Base severity: 2 - MEDIUM

Block On Rule: [Empty]

Block Off Rule: [Empty]

P1 - Change (Value): 0.2

P2 - Change period (minutes): 15

P3 - History window (minutes): 60

Info

```
User Low.....:0.20
User High.....:0.80
Statistical Low..:0.22
Statistical High.:0.71
Average.....:0.42
Median.....:0.43
STD.....:0.08
```

History of changes

2019-03-18 12:28:23

Name	Value

Detector performance

TP	FP	FN	NC	OT+IG
0	0	0	0	0

Events date range: From:2020/01/01 00:00:00 to:2020/04/23 15:18:57

Last calculation: 0001-01-01 00:00:00

Buttons: [Checkmark] [EXIT] [Print] [Calibration] (highlighted with a red box)



The Rate of Change calibration screen contains several controls. The difference between averages (minimum, maximum and interval), minutes' window (minimum, maximum and interval) and previous window size. You also have to select start and end date.

Bayit_Vagan () Detector Calibration Assistance

Detector VAR ROC Key CL

Parameters for calibration

Name	Current value
Start date	2020/02/08 16:14:38
End date	2021/02/07 16:14:38
Previous Window Size (Minutes)	60
Rows	
Difference	0.10
Difference (Max)	1.00
Difference interval	0.05
Columns	
Min Windows Size	5
Max Windows Size	20
Window Interval	1

Performance chart

Clipboard icon, Checkmark icon, EXIT button



Click on the "Run" button to see the results of the calibration analysis. A progress bar will show on the screen. You can stop the process at any time by clicking the cancel button. Exiting the screen is from the button labeled "exit".

Bayit_Vagan (CL) Detector Calibration Assistance

Detector VAR ROC **Key** CL

Parameters for calibration

Name	Current value

Start date: 2020/02/08 16:14:38 End date: 2020/02/08 18:14:38 Previous Window Size (Minutes): 60

Rows Difference: 0.10 Difference (Max): 1.00 Difference interval: 0.05

Columns Min Windows Size: 5 Max Windows Size: 20 Window Interval: 1

Performance chart

Difference	5	6	7	8	9	10	11	12
0.1	1	0	0	0	0	0	0	0
0.15	1	0	0	0	0	0	0	0
0.2	0	0	0	0	0	0	0	0
0.25	0	0	0	0	0	0	0	0
0.3	0	0	0	0	0	0	0	0
0.35	0	0	0	0	0	0	0	0

Progress Indicator

Difference: 4.5/10 Window: 5/20, 5/119.989438341667

Cancel

Clipboard, Run, EXIT



The table will show the results for each difference. This calibrator will display events' count where the variable had a vast rate of change.

If you would like to modify the detector according to a certain result, click on your selected cell and then click the tick button.

To keep the parameters for this detector click the wanted cell and then click the tick button from the policy editor window.

Detector Policy Editor

Detector type: VAR_ROC

Detector key: CL Active

Delay before trigger (min): 5

Delay after operational change (min): 0

Delay after last event close (min): 10

Notification policy: 0 - Every trigger

Base severity: 2 - MEDIUM

Block On Rule: []

Block Off Rule: []

P1 - Change (Value): 0.2

P2 - Change period (minutes): 15

P3 - History window (minutes): 60

Info

```
User Low.....:0.20
User High.....:0.80
Statistical Low.:0.22
Statistical High.:0.71
Average.....:0.42
Median.....:0.43
STD.....:0.08
```

History of changes

2019-03-18 12:28:23

Name	Value

Detector performance

TP	FP	FN	NC	OT+IG
0	0	0	0	0

Events date range: From:2020/01/01 00:00:00 to:2020/04/23 15:18:57

Last calculation: 0001-01-01 00:00:00



3. Dynamic Change Rare Detector Calibration

The Dynamic Change Rare calibration screen allows finding the alert level and memory size for the current detector.

Double click on the relevant detector to open the detectors screen or click the edit button.

Alarm Type	Detector Key	Active	Delay before trigger	Delay after oper change	Delay after last event close
NODATA	*	1	122	0	0
DYNAMIC_CHANGE_RARE	*	1	30	15	15
BAD_SIMILARITY	*	1	30	15	13
NO_SIMILARITY	*	1	30	5	5
VAR_ROC	CL	1	5	0	10
VAR_ROC	pH	1	5	0	10
VAR_ROC	TU	1	5	0	10
VAR_LONG_TREND	CL	1	60	0	60
VAR_LONG_TREND	pH	1	60	0	60
VAR_LONG_TREND	TU	1	60	0	60
VAR_FIXED	CL	1	315	15	15
VAR_FIXED	LT	1	1440	15	15
VAR_FIXED	pH	1	1440	15	15
VAR_FIXED	TU	1	1440	15	15
VAR_OUT_OF_STATISTICAL_LIMITS	CL	1	60	15	15
VAR_OUT_OF_STATISTICAL_LIMITS	pH	1	15	15	15
VAR_OUT_OF_STATISTICAL_LIMITS	PR_Out	1	1440	15	15
VAR_OUT_OF_STATISTICAL_LIMITS	TU	1	15	15	15
VAR_OUT_OF_USER_LIMITS	CL	1	15	15	15
VAR_OUT_OF_USER_LIMITS	FL	1	1440	15	15
VAR_OUT_OF_USER_LIMITS	LT	1	1440	15	15
VAR_OUT_OF_USER_LIMITS	pH	1	15	15	15
VAR_OUT_OF_USER_LIMITS	PR_Out	1	1440	15	15

Filter detectors by variables

Activate filter by variable names

- CL
- TU
- pH
- PR
- FL
- LT
- PR_Out

Filter detectors by type

Activate filter by detector types

- NO_ALARM
- VAR_OUT_OF_USER_LIMITS
- VAR_OUT_OF_STATISTICAL_LIMIT
- VAR_FIXED
- VAR_LONG_TREND
- VAR_ROC
- RULE_VIOLATION
- NO_SIMILARITY
- BAD_SIMILARITY
- DYNAMIC_CHANGE_RARE
- DYNAMIC_CHANGE_BAD

Show only active alerts

Show learning result



The calibration screen is available from this button.

Detector Policy Editor

Detector type: DYNAMIC_CHANGE_RARE

Detector key: *

Delay before trigger (min): 30

Delay after operational change (min): 15

Delay after last event close (min): 15

Notification policy: 0 - Every trigger

Base severity: 3 - HIGH

Block On Rule:

Block Off Rule:

P1 - Alert level: 0.15

P2 - Memory size (records): 10

P3 - Check significant (0 -1): 1

Active

Info: 4

History of changes:

2018-08-22 12:35:01	2017-08-02 11:51:05
2018-08-12 12:05:38	
2018-07-26 12:10:41	
2018-07-26 12:02:28	
2018-07-26 12:00:50	
2018-02-06 13:30:21	

Detector performance

TP	FP	FN	NC	OT+IG
0	0	0	35	0

Events date range: From:2020/01/01 00:00:00 to:2020/04/23 15:18:57

Last calculation: 0001-01-01 00:00:00

Buttons: [Checkmark] [EXIT] [Print] [Calibration]



The Dynamic Change Rare calibration screen contains several controls. The delay time (minimum, maximum and interval) and triggering value (minimum, maximum and interval) .You also have to select start and end date.

Bayit_Vagan () Detector Calibration Assistance

Detector **Key** *

Parameters for calibration




Name	Current value
Trigger Value	0.15

Start date: 2020/02/08 16:19:46 End date: 2021/02/07 16:19:46

Rows Delay time (Min) Delay time (Max) Delay time interval

Columns Minimum T Value Maximum T Value Triger Value Step

Performance chart



Click on the "Run" button to see the results of the calibration analysis. A progress bar will show on the screen. You can stop the process at any time by clicking the cancel button. Exiting the screen is from the button labeled "exit".

Bayit_Vagan (*) Detector Calibration Assistance

Detector **DYNAMIC CHANGE RARE** **Key ***

Parameters for calibration

Name	Current value
Triger Value	0.15

Start date: 2020/02/08 16:19:46 End date: 2020/09/02 18:19:46

Rows: Delay time (Min) 30 Delay time (Max) 120 Delay time interval 15

Columns: Minimum T Value 0.01 Maximum T Value 1.5 Triger Value Step 0.05

Performance chart

Delay Time	.01	.06	.11	.16	.21	.26	.31	.36

Progress Indicator

Delay Time: 30/120 Triger Value: 0.26/1.5

Cancel

EXIT



The table will show the results for each delay time. This calibrator will display events' count where the variable had rare dynamics above the selected T value.

If you would like to modify the detector according to a certain result, click on your selected cell and then click the tick button.

Bayit_Vagan (*) Detector Calibration Assistance

Detector **DYNAMIC CHANGE RARE** Key *

Parameters for calibration

Name	Current value
Trigger Value	0.15

Start date: 2020/02/08 16:19:46 End date: 2020/09/02 18:19:46

Rows Delay time (Min): 30 Delay time (Max): 120 Delay time interval: 15

Columns Minimum T Value: 0.01 Maximum T Value: 1.5 Trigger Value Step: 0.05

Performance chart

Delay Time	.01	.06	.11	.16	.21	.26	.31	.36
30	164	0	0	0	0	0	0	0
45	46	1	0	0	0	0	0	0

At the bottom of the window, there are three icons: a clipboard, a checkmark (highlighted with a red box), and an 'EXIT' button.



To keep the parameters for this detector click the wanted cell and then click the tick button from the policy editor window.

The screenshot shows the 'Detector Policy Editor' window with the following configuration:

- Detector type: DYNAMIC_CHANGE_RARE
- Detector key: *
- Delay before trigger (min): 30
- Delay after operational change (min): 15
- Delay after last event close (min): 15
- Notification policy: 0 - Every trigger
- Base severity: 3 - HIGH
- Block On Rule: (empty)
- Block Off Rule: (empty)
- P1 - Alert level: 0.15 (highlighted with a red box)
- P2 - Memory size (records): 10
- P3 - Check significant (0 -1): 1

The 'Active' checkbox is checked. The 'Info' section contains the number 4. The 'History of changes' section lists several timestamps. The 'Detector performance' table is shown below:

TP	FP	FN	NC	OT+IG
0	0	0	35	0

Events date range: From:2020/01/01 00:00:00 to:2020/04/23 15:18:57
Last calculation: 0001-01-01 00:00:00

At the bottom, there are icons for a checkmark, an exit button, a document, and a detector icon.