

Electronic Enterprise Reporting with no coding

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Electronic Enterprise Reporting



Challenge

Reporting and recording is mandatory, the pharma industry is moving away from paper-based reporting to Electronic Batch Recording (eBR).

Reporting is time consuming and prone for errors.

Solution

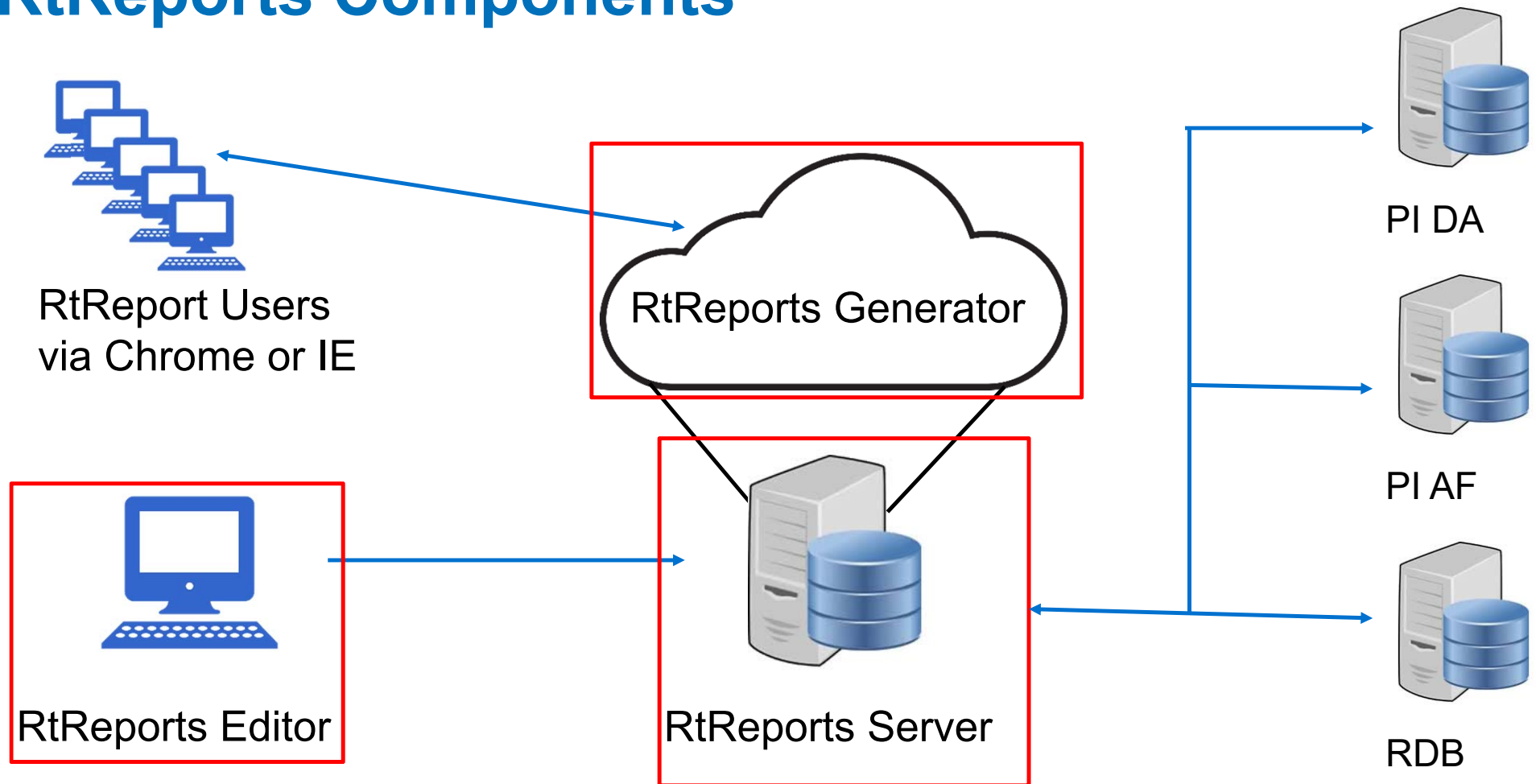
Deployed the latest OSIsoft PI Server and RtReports as an advanced foundation for electronic enterprise reporting. Features:

- Produce repeatable paperless reports without coding
- Secure web-based UI
- Support report versioning
- Reliable system validation
- Auto Reports Generation
- Compliant with 21 CFR Part 11
- All data are maintained in their original fidelity

Benefits

- Corporate standard reporting compliant with regulation
- Exception based release of batches – RbE, Review by Exception increases throughput, speeds up batch release, and reduces warehouse costs
- Key element of the digitalization and Pharma 4.0/Industry 4.0 initiatives

RtReports Components

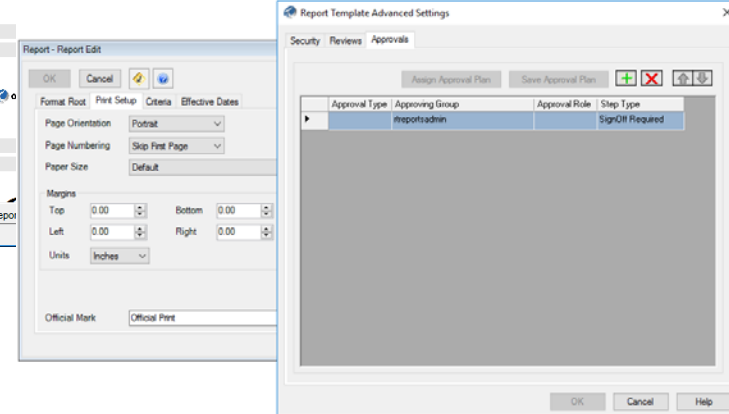
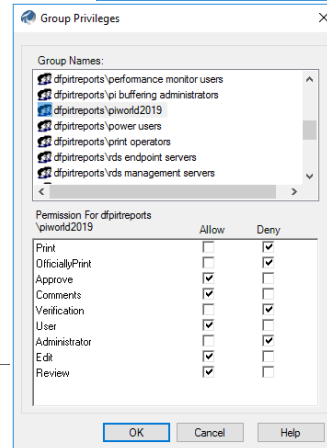
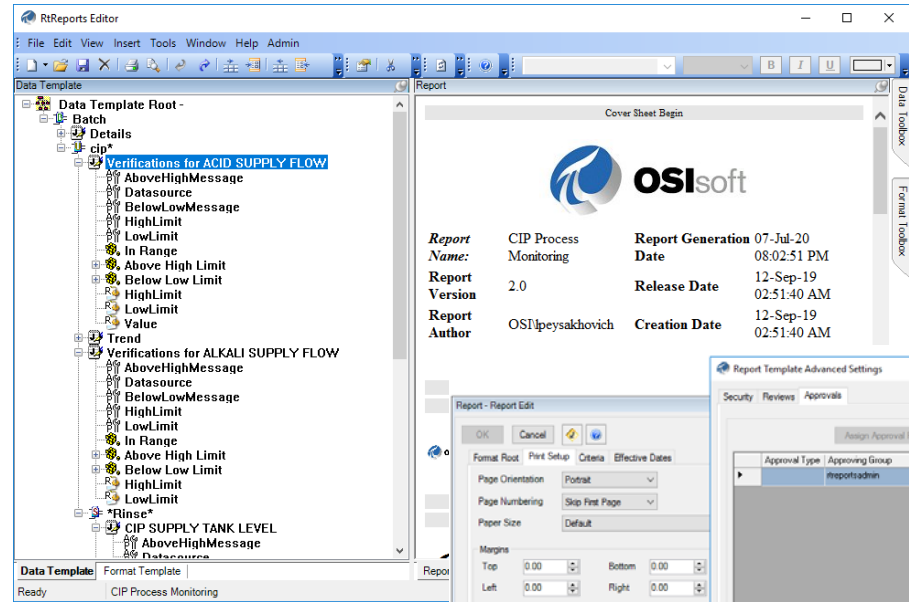


RtReports Server

- Windows Server 2012 R2 or later
- Application Server and IIS Server roles
- Hosts the:
 - RtReports Generator website
 - Printing Engine

RtReports Editor

- .NET windows application
- Manage Report Templates
 - Create/Edit/Delete/Release/Retire
 - Select and Format Data
 - Preview Reports including PDF
 - Assign Rules for
 - Comments
 - Verifications
 - Approvals
 - Reviews
 - Printing
 - Effective Dates
- Manage security



Data Aggregation

Analytical Capabilities

PI Performance Equations

Conditional Logic

Process Trends

Aggregation and External data

Sort and Structure

Batch Processes

Sub-batch processes

Time Ranges

AF Elements

RtReports Generator

- .NET web application
- Generate report:
 - Search for report template (Batch or Time)
 - Generate a report template against a specific context
 - View, comment, verify, and approve report
 - Print report to PDF
- Manage Automatic Report Generation

Batch Search Page

Search

Time Range

State: Active

Start Time: [-8h]

End Time: *

Search Condition

Data Server: (None Selected)

Asset Server: DFPIAFSERVERTS

Asset Database: OSIPharmaCIP

Product: []

Batch: OSIssoft_2*

Equipment: []

Operation: []

Phase: []

Report Condition

Batches Reports

Your search found 6 Batch that met your criteria

BatchID	Product	Recipe
OSIssoft_201583045435	CLEANING	SOP_SIP_500
OSIssoft_20158157323	Cleaning	..\recipe
OSIssoft_2015717105544	CLEANING	SOP_SIP_1151
OSIssoft_2015717121837	CLEANING	SOP_CHEMCI
OSIssoft_20158157323		..\recipe
OSIssoft_20158157323		..\recipe

RtReports

Configure View PDF

Print Approve Verify/Reprints Refresh

OSIsoft

Start: 07-Jul-20 08:00:00 AM

End: 07-Jul-20 04:00:00 PM

Duration: 8 hours

Report Not Printed

Shift Report for 8 hours

Report Name: Shift Equipment Report

Report Generation Date: 07-Jul-20 04:14:13 PM

Report Version: 2.0

Release Date: 10-Mar-20 10:57:38 AM

Start Time	End Time	Duration
07-Jul-20 08:00:00 AM	07-Jul-20 04:00:00 PM	8 hours

CIP 123 SKID

ACID SUPPLY FLOW

High Limit	99L_min	Low Limit	IL_min	
Value below low limit	Start Time	Start Value	End Time	End Value
Value below low limit	07-Jul-20 08:00:00 AM	-0.040	07-Jul-20 08:05:25 AM	2.296
Value below low limit	07-Jul-20 08:05:27 AM	-0.038	07-Jul-20 08:11:49 AM	2.343
Value below low limit	07-Jul-20 08:12:50 AM	-0.034	07-Jul-20 08:27:17 AM	2.371
Value below low limit	07-Jul-20 08:27:20 AM	-0.026	07-Jul-20 08:29:26 AM	2.520
Value below low limit	07-Jul-20 08:29:27 AM	-0.038	07-Jul-20 08:34:06 AM	1.772
Value below low limit	07-Jul-20 08:34:07 AM	-0.033	07-Jul-20 08:49:21 AM	2.426
Value below low limit	07-Jul-20 08:49:24 AM	-0.033	07-Jul-20 08:51:37 AM	2.897
Value below low limit	07-Jul-20 08:51:40 AM	-0.034	07-Jul-20 08:53:53 AM	2.322
Value below low limit	07-Jul-20 08:53:56 AM	-0.038	07-Jul-20 08:56:41 AM	2.139
Value below low limit	07-Jul-20 08:56:43 AM	0.039	07-Jul-20 09:02:35 AM	2.300
Value below low limit	07-Jul-20 09:02:37 AM	0.117	07-Jul-20 09:15:56 AM	2.141
Value below low limit	07-Jul-20 09:15:59 AM	-0.038	07-Jul-20 09:18:01 AM	2.465
Value below low limit	07-Jul-20 09:18:02 AM	0.182	07-Jul-20 09:24:49 AM	2.071
Value below low limit	07-Jul-20 09:24:51 AM	-0.038	07-Jul-20 09:36:43 AM	2.871
Value below low limit	07-Jul-20 09:36:46 AM	-0.032	07-Jul-20 09:40:26 AM	2.247
Value below low limit	07-Jul-20 09:40:29 AM	-0.033	07-Jul-20 09:53:57 AM	1.776
Value below low limit	07-Jul-20 09:53:58 AM	-0.034	07-Jul-20 09:56:26 AM	2.243
Value below low limit	07-Jul-20 09:56:32 AM	0.019	07-Jul-20 09:58:43 AM	1.994
Value below low limit	07-Jul-20 09:58:44 AM	0.076	07-Jul-20 10:04:38 AM	2.771
Value below low limit	07-Jul-20 10:04:42 AM	-0.038	07-Jul-20 10:37:29 AM	1.839
Value below low limit	07-Jul-20 10:37:30 AM	-0.034	07-Jul-20 10:50:09 AM	2.377
Value below low limit	07-Jul-20 10:50:13 AM	-0.033	07-Jul-20 10:59:26 AM	2.500
Value below low limit	07-Jul-20 10:59:29 AM	0.066	07-Jul-20 11:01:57 AM	1.949
Value below low limit	07-Jul-20 11:01:58 AM	-0.033	07-Jul-20 11:11:30 AM	2.471
Value below low limit	07-Jul-20 11:11:31 AM	0.082	07-Jul-20 11:16:53 AM	2.147
Value below low limit	07-Jul-20 11:16:53 AM	0.034	07-Jul-20 11:17:58 AM	2.705
Value below low limit	07-Jul-20 11:18:00 AM	-0.038	07-Jul-20 11:24:47 AM	2.475
Value below low limit	07-Jul-20 11:24:53 AM	-0.033	07-Jul-20 11:33:17 AM	1.923
Value below low limit	07-Jul-20 11:33:20 AM	0.070	07-Jul-20 11:39:22 AM	2.481
Value below low limit	07-Jul-20 11:39:28 AM	-0.038	07-Jul-20 11:40:59 AM	2.021
Value below low limit	07-Jul-20 11:40:33 AM	-0.002	07-Jul-20 11:47:30 AM	2.418
Value below low limit	07-Jul-20 11:47:33 AM	-0.038	07-Jul-20 11:52:12 AM	2.669
Value below low limit	07-Jul-20 11:52:16 AM	-0.033	07-Jul-20 11:52:47 AM	2.626
Value below low limit	07-Jul-20 11:52:50 AM	-0.014	07-Jul-20 12:08:03 PM	2.555
Value below low limit	07-Jul-20 12:08:05 PM	0.114	07-Jul-20 12:16:18 PM	2.445
Value below low limit	07-Jul-20 12:16:19 PM	0.936	07-Jul-20 12:20:56 PM	2.361
Value below low limit	07-Jul-20 12:20:58 PM	0.094	07-Jul-20 12:21:53 PM	1.747
Value below low limit	07-Jul-20 12:21:55 PM	-0.038	07-Jul-20 12:32:01 PM	2.322
Value below low limit	07-Jul-20 12:32:04 PM	-0.038	07-Jul-20 12:39:54 PM	1.788
Value below low limit	07-Jul-20 12:39:55 PM	-0.033	07-Jul-20 12:46:26 PM	3.015
Value below low limit	07-Jul-20 12:46:28 PM	0.000	07-Jul-20 12:58:26 PM	1.925

RtReports Features

Features

AF Support

Asset Context
Template

Read-only
PDF

Automatic
Report
Generation

Security
Improvements

Asset Context Template

Efficient

Similar
Element
Names

Element
Template
Support

Granular

Report on EF
Children Only

Report on all
descendants

Flexible

Support
relative and
absolute
attributes

Nested Asset
Context
Templates

AF Asset Context Template Reporting

- Multiple criteria to report on Assets/Elements
 - Asset Template
 - Asset Name
 - Root Path
 - Nested Context

The screenshot displays the 'Data Template' application window. The top pane shows a tree view under 'Data Template Root -' with the following structure:

- Time
 - X SKID
 - Acid Tank Level
 - Verifications
 - *

Data - Asset Context Template Edit

Asset Context Template Edit

OK Cancel [Help] [Refresh]

Template Name: X SKID

Asset Name: *

Display Name:

Root Path: \PharmaCO\North America\Philadelphia\NorthStreetPlant\LL1 HuMAB

Sort Order: Ascending Descending

Description:

AF Asset Support

- Journal Action Parameter 'AFAttribute', supports Relative or Absolute Path
- Result Definition for AF Attribute
 - AF Attribute Value
- Support for AF Limits/Traits
- Support Asset Versioning

Journal Action Edit

Event Name: Direct Action

Output	Name	Type	Description
<input type="checkbox"/>	HighLimit	AFAttribute Value	New Description
<input type="checkbox"/>	LowLimit	AFAttribute Value	New Description

Name	Type	Value	Dynamic
AboveHighMe...	Literal	Value abo...	No
Datasource	AFAttribute	ICIP Flow ...	Yes
BelowLowMes...	Literal	Value bel...	No
Hi	Literal	108	Yes
Lo	Literal	64	Yes
HighLimit	AFAttribute	ICIP Flow ...	Yes
LowLimit	AFAttribute	ICIP Flow ...	Yes
InRangeMess...	Literal	Value in r...	Yes

Time Parameters: Start Time Context: Context Start, End Time Context: Context End

Data Parameters: Data Source: [[HighLimit]]

EF Support

- Journal Action Parameter 'EFAttribute'
- Result Definition for EF Attribute
 - AF Attribute Value

Action Parameters

Name	Type	Value	Dynamic
Product	EFAttribute	Product	Yes
Recipe	EFAttribute	Recipe	Yes

Result Definitions

Output	Name	Type	Description
<input type="checkbox"/>	Product	AFAttribute Value	New Description
<input type="checkbox"/>	Recipe	AFAttribute Value	New Description

Data Parameters

Data Source:

Additional Features:

- Support Trend Colors Configuration for individual sites
- Support Array Types

Automatic Report Generation

- Automatically generate reports based on EF/Batch criteria
 - Create multiple EF/Batch completion criteria for each report template
 - Support multiple conditions for report generation criteria
- Automatically generate Time Reports based on Time Criteria
- Automatically send emails with report links after reports generation

Security Improvements

Read-Only PDFs

HTTPS Support

Address OWASP top-10 vulnerabilities

Demo

Process Excursion Batch Report

- Highlights excursion throughout a CIP Process
- View only process deviations in the overarching procedure and gain more granularity by scrutinizing individual operations
- Each child event frame showcases deviations in tabular and graphical forms, allowing users to view the data as they see fit

Process Excursion Batch Report (Editing)

RtReports Editor

File Edit View Insert Tools Window Help Admin

Data Template

- Data Template Root -
 - Batch
 - Details
 - cip*
 - Verifications for ACID SUPPLY FLOW
 - Trend
 - Verifications for ALKALI SUPPLY FLOW
 - Rinse*
 - CIP SUPPLY TANK LEVEL
 - Trend

Report

Cover Sheet Begin

Report Name: CIP Process Report Generation: 07-Jul-20 08:02:51 PM
 Report Version: 2.0 Release Date: 12-Sep-19 02:51:40 AM
 Report: 12-Sep-19 02:51:40

Data - Journal Action Edit

Journal Action Edit

Name: Verifications for ALKALI SUPPLY FLOW

Description:

Index	State Name
1	In Range
2	Above High Limit

Transition Equation: Hidden Default State [?]

IF [{"Datasource"}] > [{"HighLimit"}] THEN 2 ELSE IF [{"Datasource"}] < [{"LowLimit"}] THEN 3 ELSE -1

Result Definitions

Output	Name	Type	Description

Time Parameters: Data Parameters:

Action Parameters

Name	Type	Value	Dynamic
AboveHighMe...	Literal	Value abo...	No
Datasource	EFAttribute	ICIP SUP...	Yes
BelowLowMes...	Literal	Value bel...	No
HighLimit	AFAttribute	\PharmaC...	Yes
LowLimit	AFAttribute	\PharmaC...	Yes

Data - Journal Action Edit

Journal Action Edit

Name: Verifications for ACID SUPPLY FLOW

Description:

Index	State Name
1	In Range
2	Above High Limit

Transition Equation: Hidden Default State [?]

IF [{"Datasource"}] > [{"HighLimit"}] THEN 2 ELSE IF [{"Datasource"}] < [{"LowLimit"}] THEN 3 ELSE -1

Result Definitions

Output	Name	Type	Description

Time Parameters: Data Parameters:

Action Parameters

Name	Type	Value	Dyn
AboveHighMe...	Literal	Value above high limit	No
Datasource	AFAttribute	ICIP SUPPLY FLOW	Yes
BelowLowMes...	Literal	Value below low limit	No
HighLimit	AFAttribute	ICIP SUPPLY FLOW/Hg...	Yes
LowLimit	AFAttribute	ICIP SUPPLY FLOW/Lo...	Yes

Conditional Logic

Process Excursion Report (PDF)

Trend

BatchID	Product	Recipe	Start	End	Duration
OSIsoft_201581202655	CLEANING	SOP_MAINTCIP_MediumTank_CIP	12-Sep-18 05:47:46 PM	12-Sep-18 07:45:25 PM	1 hour 57 minutes 39 seconds

Clean In Place Process Monitoring

Report Name: CIP Process Monitoring Report Generation Date: 20-Nov-19 10:35:15 AM
 Report Version: 1.0 Release Date: 21-Sep-18 09:17:32 PM
 Report Author: OSIpeysakhovich Creation Date: 20-Mar-19 01:31:08 PM

BatchID	Product	Recipe	Start Time	End Time	Duration
OSIsoft_201581202655	CLEANING	SOP_MAINTCIP_MediumTank_CIP	12-Sep-18 05:47:46 PM	12-Sep-18 07:45:25 PM	1 hour 57 minutes 39 seconds

Generated By	Generated Date	Report Name	Report Version
lpeysakhovich	20-Nov-19 10:35:19 AM	CIP Process Monitoring	1.0

Approvals

By	Date	Comments
peysakhovich	11/20/2019 10:38:25 AM	I recommend that you download and review the document "RtReports Third-Party Packages and Additional Signing Information.docx" which is located in the RtReports Downloads page of the OSIsoft Tech Support web site. This document contains additional information on the signing and hashing of files that are installed.

Batch Verifications

By	Date	Comments
peysakhovich	11/20/2019 10:38:01 AM	RtReports has two major components.

Product

Product	Start Time
CLEANING	12-Sep-18 05:47:46 PM

Recipe

Recipe	Start Time
SOP_MAINTCIP_MediumTank_CIP	12-Sep-18 05:47:46 PM

Batch Comments

BatchID	Product	Recipe	Start Time	End Time
OSIsoft_201581202655	CLEANING	SOP_MAINTCIP_MediumTank_CIP	9/12/2018 5:47:46 PM	9/12/2018 7:45:25 PM

OSIsoft_201581202655 | 9/12/2018 5:47:46 PM | 9/12/2018 7:45:25 PM

peysakhovich | peysakhovich | 11/20/2019 10:37:48 AM

Generated By: lpeysakhovich Generated Date: 20-Nov-19 10:35:19 AM Report Name: CIP Process Monitoring Version: 1.0

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Equipment	Unit Procedure	Start Time	End Time	Duration
CIP_123_SKID	UP_CIPSKID_CHEMCIP1	12-Sep-18 06:24:24 PM	12-Sep-18 07:35:30 PM	1 hour 11 minutes 6 seconds

Verifications for ACID SUPPLY FLOW High Limit 99 Low Limit 1

Violation Message	Violation Value	Violation Time	Return Value	Return Time
Value below low limit	-0.04	12-Sep-18 06:24:24 PM	1.02	12-Sep-18 06:45:58 PM
Value below low limit	-0.04	12-Sep-18 06:46:01 PM	7.36	12-Sep-18 06:50:42 PM
Value below low limit	-0.04	12-Sep-18 06:55:11 PM	2.39	12-Sep-18 07:17:13 PM
Value below low limit	-0.04	12-Sep-18 07:17:15 PM	2.22	12-Sep-18 07:18:23 PM
Value below low limit	-0.04	12-Sep-18 07:18:28 PM	2.48	12-Sep-18 07:33:50 PM
Value below low limit	-0.04	12-Sep-18 07:33:53 PM	2.46	12-Sep-18 07:34:30 PM
Value below low limit	-0.04	12-Sep-18 07:34:35 PM	2.32	12-Sep-18 07:34:50 PM
Value below low limit	0.14	12-Sep-18 07:34:55 PM	-0.04	12-Sep-18 07:35:30 PM

Verifications for ALKALI SUPPLY FLOW High Limit 99 Low Limit 1

Violation Message	Violation Value	Violation Time	Return Value	Return Time
Value below low limit	-0.04	12-Sep-18 06:24:24 PM	1.07	12-Sep-18 06:40:40 PM
Value below low limit	-0.03	12-Sep-18 06:46:58 PM	2.85	12-Sep-18 06:56:10 PM
Value below low limit	-0.03	12-Sep-18 06:56:12 PM	-0.03	12-Sep-18 07:35:30 PM

Generated By: lpeysakhovich Generated Date: 20-Nov-19 10:35:19 AM Report Name: CIP Process Monitoring Version: 1.0

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BatchID	Product	Recipe	Start	End	Duration
OSIsoft_201581202655	CLEANING	SOP_MAINTCIP_MediumTank_CIP	12-Sep-18 05:47:46 PM	12-Sep-18 07:45:25 PM	1 hour 57 minutes 39 seconds

ACID SUPPLY FLOW

Attribute Name	Start Value	End Value	Max Value	Min Value
ACID SUPPLY FLOW	-0.04	-0.04	63.33	-0.04
ALKALI SUPPLY FLOW	-0.04	-0.03	64.36	-0.04

Operation: OP_CIPSKID_RINSE:3

Start time: 12-Sep-18 06:24:24 PM End Time: 12-Sep-18 06:30:55 PM
 Duration: 6 minutes 31 seconds

CIP SUPPLY TANK LEVEL High Limit 10 Low Limit 0

Violation Message	Violation Value	Violation Time	Return Value	Return Time
Value above high limit	22.00	12-Sep-18 06:24:24 PM	47.00	12-Sep-18 06:30:55 PM

Generated By: lpeysakhovich Generated Date: 20-Nov-19 10:35:19 AM Report Name: CIP Process Monitoring Version: 1.0

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Highlights excursions (event frames)

Child event frame showcases deviations

Report: Tank Process Monitoring(Batch report)

- Event Frame :
 - Batch OSIssoft_201583045435
 - Product=CLEANING
 - Recipe SOP_SIP_500L_CIP_
 - Start Time 7/9/2018 4:22:26 PM
 - End Time 7/9/2018 8:00:00 PM

https://dfpirtreports.osisoft.com/RtReports/WebPages/ReportTemplate.aspx?ReportName=Tank+Process+Monitoring&ReportVer=1.0&PersistStr=198+%7b9895150E-085D-4fcb-A16D-5EF5D2527196%7d+2%5c%7ba14c2043-b33c-4d0e-b96b-a002d3ca2e6f%7d%5cEventFrames%5b%7bf0dae308-83ce-11e8-9128-001dd8b71d5d%7d%5d*DFPIAFSERVERTST%5cOSIPharmaCIP%5cEventFrames%5bOSIssoft_201583045435%5d&UniqueID=f0dae308-83ce-11e8-9128-001dd8b71d5d&Server=dfpiafservertst

The screenshot shows the 'Batch Search Page' in the RtReports application. The search criteria are: State: Active, Start Time: 7/9/2018 4:22:26 PM, End Time: 7/9/2018 8:00:00 PM, Product: CLEANING, Recipe: SOP_SIP_500L_CIP_.

BatchID	Product	Recipe	StartTime	EndTime
OSIssoft_201582772437	Cleaning	Unscope	11/12/18 1:38:47 PM	3/5/2020 10:20:14 AM
OSIssoft_201582618969	CLEANING	SOP_CHEMCIP_500L	2/8/2017 3:21:35 AM	2/8/2017 5:45:49 AM
OSIssoft_201582619125	CLEANING	SOP_CHEMCIP_500L	2/8/2017 3:23:01 AM	2/8/2017 5:50:39 AM
OSIssoft_201582619125	CLEANING	SOP_CHEMCIP_500L	2/8/2017 3:23:01 AM	2/8/2017 5:50:39 AM
OSIssoft_201583045435	CLEANING	SOP_SIP_500L_CIP_	7/9/2018 4:22:26 PM	7/9/2018 8:00:00 PM
OSIssoft_20158157323	Cleaning	Unscope	1/20/2019 1:56:03 PM	*
OSIssoft_2015717185544	CLEANING	SOP_SIP_115L_CIP_	4/4/2019 4:58:28 PM	*
OSIssoft_2015717121837	CLEANING	SOP_CHEMCIP_500L	4/4/2019 6:21:21 PM	*
OSIssoft_20157171312	CLEANING	SOP_SIP_115L_CIP_	4/4/2019 7:03:46 PM	3/23/2020 3:37:49 PM
OSIssoft_201587121913	CLEANING	SOP_SIP_45L_CIP_	4/26/2019 6:21:57 PM	3/23/2020 3:37:49 PM
OSIssoft_20157224949	Cleaning	Unscope	4/26/2019 6:29:49 AM	3/23/2020 3:37:49 PM
OSIssoft_20158157323	Cleaning	Unscope	3/1/2020 11:07:13 PM	*
OSIssoft_20158157323	Cleaning	Unscope	3/1/2020 7:11:39 AM	*

The screenshot shows the 'Report Search Page' in the RtReports application. The search criteria are: Report Name: Tank Process Monitoring, Version: 2.0, Description: Tank Process Monitoring.

Report Name	Version	Description	Status	RunTime
Monthly Production Report	1.0		Not Run	1.98
Pre-Sales EMEA 2	1.0		In Edit	
Pre-Sales EMEA demo	1.0		In Edit	
Sample Request for Training	1.0		In Edit	
Tank Process Monitoring	1.0		Not Yet Appro	20.46
Tank Process Monitoring	2.0		In Edit	
Test	1.0		In Edit	
test and delete	1.0		Not Run	1.07
test security	1.0		Not Run	5.09
Test Trend	1.0		Not Run	0.000
Test1	1.0		In Edit	
testing armit records	1.0		Not Run	2.77
TestRecord 0_DIC1	1.0		Not Run	12.21

Sampled Shift Equipment Report

- Details process parameters for multiple pieces of equipment at every hour mark (user changeable online) for shift
- Color coding quickly and efficiently shows whether the parameters are within specifications

Interval: Every Hour

The screenshot shows the RtReports web application interface. At the top, there are navigation links for 'Configure', 'View PDF', 'Print', 'Approve', and 'Verifications'. The 'Report Parameters' section includes a text input field for 'Interval(in seconds)' set to '3600' and a 'Refresh' button. Below this is a table with columns 'Start', 'End', 'Duration', and 'Interval(min)'. The main report title is '8 hours Shift Report with 60 minute(s) Interval'. The report name is 'Shift Detailed Equipment Report' and the report version is '2.0'. The report generation date is '06-Sep-20 10:54:33 AM' and the release date is '10-Mar-20 10:53:17 AM'. The equipment identifier is 'CIP_123_SKID'. The data table has columns for 'Time', 'ACID SUPPLY FLOW L/h', 'ALKALI SUPPLY FLOW L/h', 'CIP SUPPLY CONDUCTIVITY', and 'CIP SUPPLY TEMPERATURE °C'. The first row of data is color-coded: '1.0000' (green), '99.0000' (red), '1.0000' (green), '99.0000' (red), '-0.0400' (green), '4.3400' (red), '70.0000' (green), and '85.0000' (red). Subsequent rows show negative values for flow and conductivity, and positive values for temperature.

Time	ACID SUPPLY FLOW L/h	ALKALI SUPPLY FLOW L/h	CIP SUPPLY CONDUCTIVITY	CIP SUPPLY TEMPERATURE °C
	1.0000	1.0000	-0.0400	70.0000
12:00:00 AM	-0.0380	-0.0337	-0.0396	21.1491
01:00:00 AM	-0.0378	-0.0337	-0.0339	21.1254
02:00:00 AM	-0.0392	-0.0337	-0.0376	20.9463
03:00:00 AM	-0.0376	-0.0337	-0.0371	21.0106
04:00:00 AM	-0.0375	-0.0337	42.7107	81.2671
05:00:00 AM				

Sampled Shift Equipment Report (PDF)

Start	End	Duration	Interval(s)
22 Mar 19 12:00:00 AM	22 Mar 19 08:00:00 AM	8 hours	60.00

8 hours Shift Report with 60 minute(s) Interval

Report Name: Shift Detailed Equipment Report Report Generation Date: 22 Mar 19 10:43:36 AM
 Report Version: 1.0 Release Date: 22 Mar 19 10:40:19 AM

CIP 123 SKID

Time	ACID SUPPLY FLOW LA	ALKALI SUPPLY FLOW LA	CIP SUPPLY CONDUCTIVITY µS/cm	CIP SUPPLY TEMPERATURE °C
12:00:00 AM	0.0000	0.0000	0.0000	21.5000
01:00:00 AM	-0.0183	-0.0402	-0.0037	20.7738
02:00:00 AM	-0.0186	-0.0370	-0.0047	20.7549
03:00:00 AM	-0.0186	-0.0345	-0.0096	20.6940
04:00:00 AM	-0.0196	-0.0367	-0.0025	20.7461
05:00:00 AM	-0.0176	-0.0394	-0.0006	20.6130
06:00:00 AM	-0.0181	-0.0353	-0.0032	20.5700
07:00:00 AM	-0.0176	-0.0357	-0.0037	20.5980
08:00:00 AM	-0.0189	-0.0315	-0.0015	20.4908
09:00:00 AM	-0.0176	-0.0382	-0.0032	20.5626

CIP 124 SKID

Time	ACID SUPPLY FLOW LA	ALKALI SUPPLY FLOW LA	CIP SUPPLY CONDUCTIVITY µS/cm	CIP SUPPLY TEMPERATURE °C
12:00:00 AM	0.0000	0.0000	0.0000	21.5000
01:00:00 AM	0.0000	-0.0219	0.0056	20.7135

Creation Date: 22 Mar 19 12:25:18 PM 1 of 3 Generation Date: 22 Mar 19 10:43:35 AM

Start	End	Duration	Interval(s)
22 Mar 19 12:00:00 AM	22 Mar 19 08:00:00 AM	8 hours	60.00

08:00:00 AM	-0.0147	-0.0219	-0.0039	21.4000
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CIP 432 SKID

Time	ACID SUPPLY FLOW LA	ALKALI SUPPLY FLOW LA	CIP SUPPLY CONDUCTIVITY µS/cm	CIP SUPPLY TEMPERATURE °C
12:00:00 AM	0.0000	0.0000	0.0000	21.5000
01:00:00 AM	-0.0049	-0.0064	-0.0000	22.3472
02:00:00 AM	-0.0063	-0.0222	-0.0097	23.3086
03:00:00 AM	-0.0044	-0.0276	-0.0000	21.8930
04:00:00 AM	-0.0030	-0.0416	-0.0115	23.3042
05:00:00 AM	-0.0067	-0.0376	-0.0036	22.0661
06:00:00 AM	-0.0054	-0.0249	-0.0090	21.8119
07:00:00 AM	-0.0062	-0.0219	-0.0000	21.8227
08:00:00 AM	-0.0080	-0.0286	-0.0048	21.7906
09:00:00 AM	-0.0032	-0.0400	-0.0032	21.9049

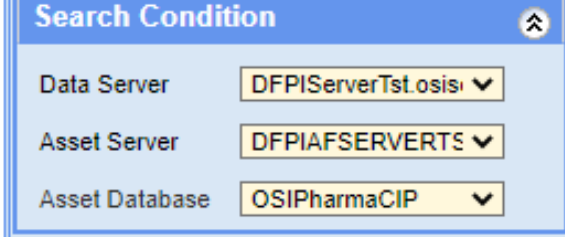
Report Signature

Operator Signature _____ Date _____
 Shift Supervisor Signature _____ Date _____
 Quality Assurance Signature _____ Date _____

Creation Date: 22 Mar 19 12:25:18 PM 3 of 3 Generation Date: 22 Mar 19 10:43:35 AM

Shift Detailed Equipment Report (Time Report)

- Shift Detailed Equipment Report



Search Condition	
Data Server	DFPIServerTst.osis
Asset Server	DFPIAFSERVERTST
Asset Database	OSIPharmaCIP

- <https://dfpirtreports.osisoft.ext/RtReports/WebPages/ReportTemplate.aspx?ReportName=Shift%20Detailed%20Equipment%20Report&ReportVer=2.0&Server=&cFlag=1&PageNo=1&timeAFServer=DFPIAFSERVERTST&timeAFDatabase=OSIPharmaCIP&StartTime=06-Sep-2020%2000%3A00%3A00&EndTime=06-Sep-2020%2008%3A00%3A00&Param1=Interval&Val1=3600>

Feedback

- <https://feedback.osisoft.com/>

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OSIsoft, LLC

Thank you

謝謝
 DZIĘKUJĘ CI
 NGIYABONGA
 TEŞEKKÜR EDERİM
 DANKIE
 TERIMA KASIH
 SPASIBO
 ПАСИБО
 GRAZIE
 МАХАДСАНИД
 GO RAIBH MAITH AGAT
 БЛАГОДАРЯ
 GRACIAS
 ТИ БЛАГОДАРАМ
 TAK DANKE
 RAHMAT
 HATUR NUHUN
 PAXMAT САГА
 CÁM ƠN BẠN
 WAZVIITA
 TAPADH LEIBH
 KEA LEBONA
 БАЯРЛАЛАА
 MISAOTRA ANAO
 WHAKAWHETAI KOE
 DANKON TANK TAPADH LEAT
 MATUR NUWUN
 ХВАЛА ВАМ
 MULȚUMESC
 GRAZIE
 고맙습니다
 SHUKRA
 HVALA
 FAAFETA
 ESKERRIK ASKO
 HVALA
 TEŞEKKÜR EDERİM
 OBRIGADO
 DANKJE
 ΕΥΧΑΡΙΣΤΩ
 GRATIAS TIBI
 AČIŪ
 SALAMAT
 MAHALO IĀ 'OE
 TAKK SKALDU HA
 ДЗЯКУЙ
 MERCI
 DI OU MÈSI
 ĀKIJEM
 GRAZZI
 PAKKA PÉR
 ありがとうございました
 SIPAS JI WERE
 TERIMA KASIH
 UA TSAUG RAU KOJ
 TI БЛАГОДАРАМ
 СИПОС
 KÖSZÖNÖM
 GRACIES
 SALAMAT
 MAHADSANID
 MAHALO IĀ 'OE
 DZЯКУЙ
 FALEMINDERIT