

MOVICON™



What's New in Movicon.NExT™ Version 4.2

Release Notes

Movicon.NExT™

Software platform for modern, modular automation

While maintaining the remarkable flexibility, scalability and performance of the Movicon.NExT automation software, the Movicon.NExT 4.2 platform incorporates major advancements that help operators monitor and manage their operations more efficiently. The Movicon.NExT solution provides connectivity, supervision, and production data analytics that scale from small IIoT or WebHMI applications such as those on embedded Linux devices to large-scale Windows server systems.

The Movicon.NExT 4.2 platform also brings significant enhancements to its visualization, usability, communications, performance, augmented reality, scalability and productivity capabilities. The following Release Notes detail the range of advancements to be found in the new Movicon.NExT 4.2 software that make it the most modern, easy-to-use automation platform available.

Enhanced Usability

Easier development and deployment

- Easier management of services (start, stop, install, uninstall) from the workspace, eliminating the need to be at the local machine and reducing time required for deployment
- Better visibility of the deployed version by displaying the information of the deploy Server at the end device, so customers will be able to identify if the version on the target machine is different from the local version and decide to overwrite when necessary
- Better access to all Movicon.NExT running services for all projects (I/O Data Server, WebClient App, WebHMI, etc.) to identify if a service should be running or if there are any duplicates; this capability will help customers reduce errors
- Improved development capabilities by using cross reference; duplicate variables are now displayed in the cross reference making it easier to correct mistakes when 2 tags with the same node ID are present, enabling users to rename incorrect references for screens
- Easier data management: now it's possible to select the format required to show the value of the tag in the watch window, so it could be changed to tag, hexadecimal, octal, etc.
- The management of the information recorded inside logs has been optimized
- Enhanced Movicon.NExT Builder: DLL allows customers to create portions of the project (text, alarms, etc.) with scripting, and two new methods have been added to obtain the list of users and the list of roles present in a project, as well as password changes, levels, etc.
- Added support for Array data types into events using expression
- Added support for Array and Structures data types to recipes

- Added CFR21 support for recipes
- Recipe service is an OPC UA Server
- Added watchdog for scripts; this allows restarting a script in case of an unexpected exception
- Added the ability to concatenate strings of a project
- Applied a new custom theme to the workspace to better understand the options chosen from the workspace while developing a project
- Added the 'find&replace' functionality inside screens to improve project development

Expanding WebHMI capabilities

- Improved web browsing by adding the support for WebView objects, which enables developers to integrate any web content into a screen
- Added the support for the systemlog viewer object, which helps users during troubleshooting
- Additional object available to improve development experience and added support for the ChartXY object, Listbox object and border color animation on SVG elements
- Added capability for Javascripting in the background
- Added the support for ipCamera object

Cost-effective alarm notification and alarms enhancements

- Improved alarms notification to reduce infrastructure cost by adding a new plugin that sends push notification using Firebase
 - Push notifications to smartphones using Firebase even if the phone is locked, and users can declare priority of the messages
 - There's no need for a modem at the server level, just online tools, which reduces the time/cost of sending alarms
- Added new alarm condition "Between" to define activation of an alarm between two values (Activation low value and high value)

Licensing made easier

- Enhanced license management by improving the visibility of enabled licenses, as well as adding a server-side and client-side system variable that reports the detected license number, enabling the addition of the license serial number as a variable that can be used in a project
- GO-Global software sessions are now licensed as remote desktop sessions
- Added the concept of unlimited license on number of tags (limited by the hardware)

Improved project troubleshooting

- Improved comparison function between periods on Data Analysis objects to compare the same variable in different periods

Easier implementation of PACEdge solutions

- Created a shared data bus to simplify data exchange of tag data within the PACEdge development environment, reducing the time of connecting internal solutions

Strengthening Communications

- Improved connectivity functionality by adding 'test connection' for communication drivers
- Within driver channel settings, communication could be tested to define if any problems exist
- Enabled management of %W memory areas for the Emerson Ethernet driver
- Accelerated server startup by using the last valid aggregation file
- Optimized the reading of the S7TCP driver
- Increased communication availability when simultaneous drivers are needed.
 - In applications that require simultaneous drivers, one of the drivers can have low quality (a communication error will be generated), and the other driver will continue communicating
- Added support for messages in RAW format for exchanging string type tags on MQTT driver, making it possible to manage any MQTT payload format using an ad-hoc script
- Addition of MTConnect and SIMOTION drivers

Increasing Performance

- Optimization of WebHMI screen loading and Movicon.NExT opening of screens
- Added new flat objects (display, slider, combo box, checkbox, button, knob) to the toolbox for applications with high HMI performance

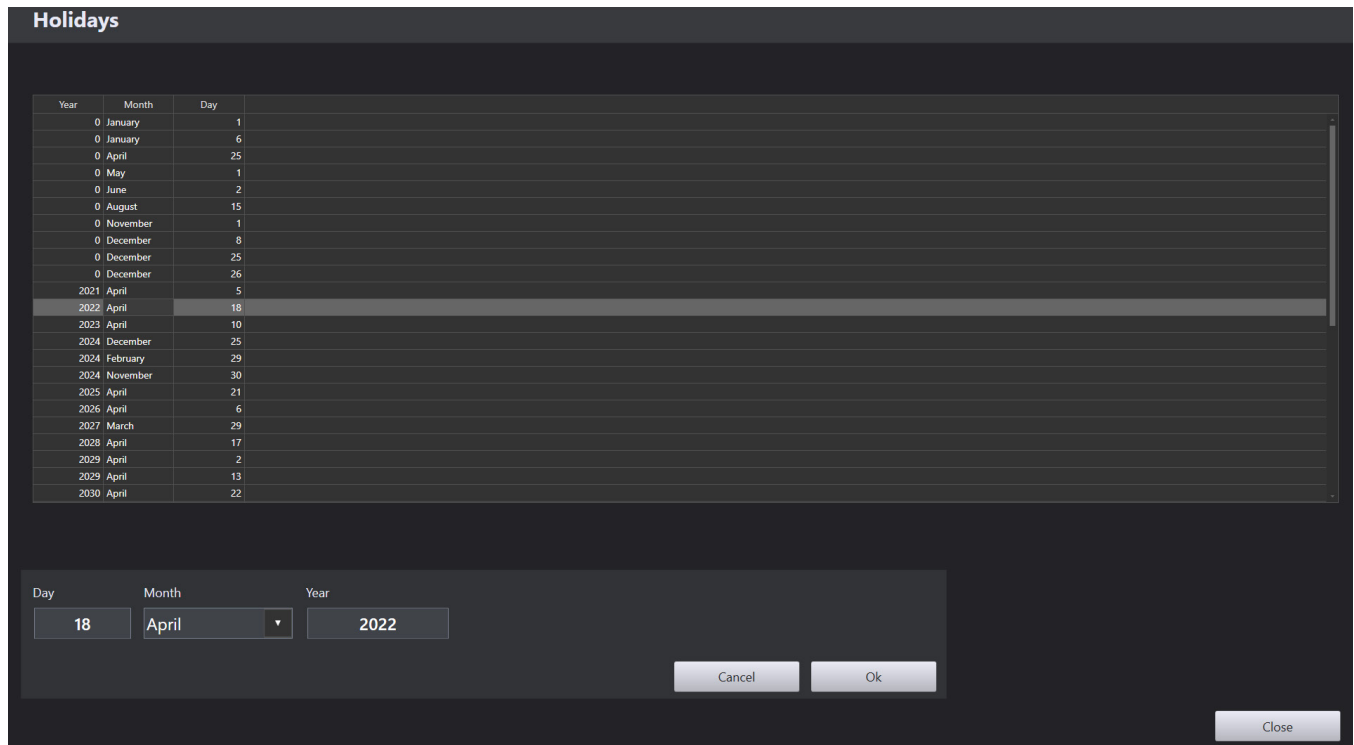
Amplified Augmented Reality

- Enabled zoom in camera view to provide access to difficult to reach assets by using Android devices, optimizing operations on site and making maintenance faster and more efficient
- New QR code management support simplifies and speeds AR projects

Expanded Productivity

Easier Navigation

- With the implementation of the new three-tier facility, users can get shift and day OEE data grouped by plant and department, making it easier to navigate OEE metrics

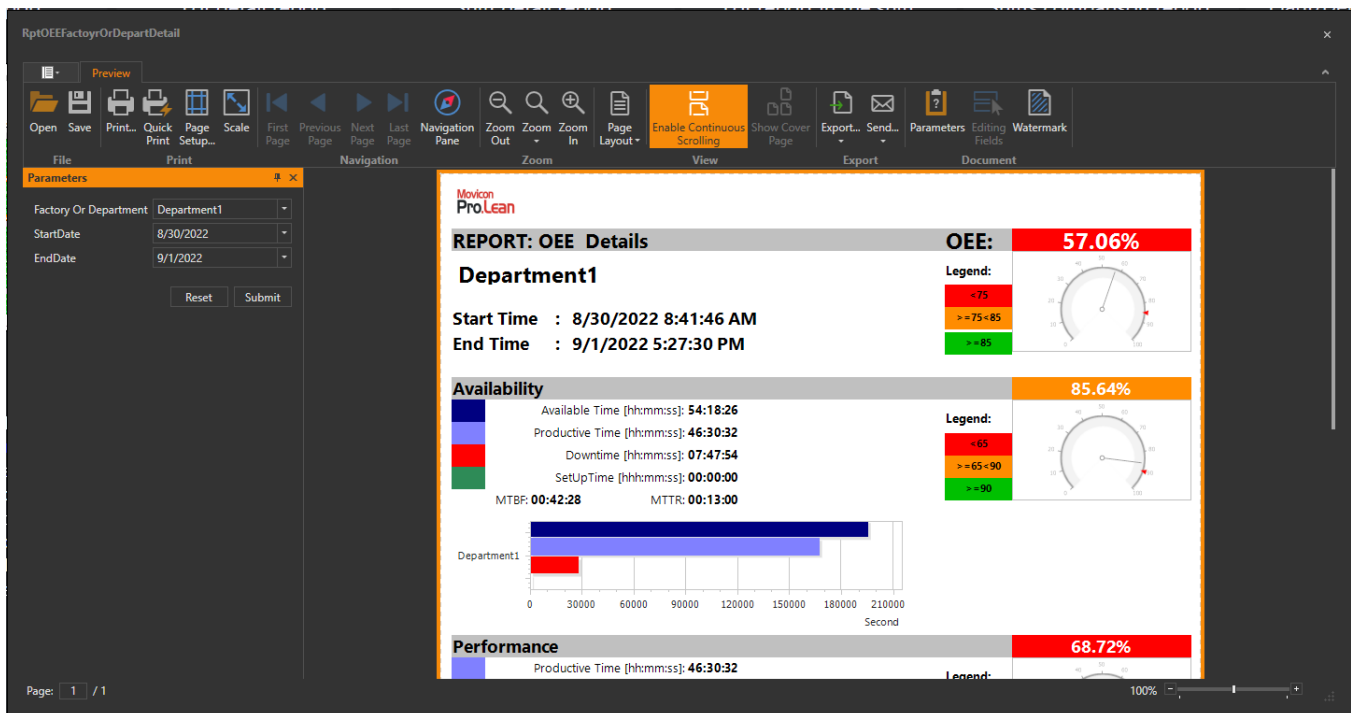


- Improved consultation of data with interactive view



Increased reporting capabilities

- Added a report that allows users to obtain historical OEE data by plant or department, improving the visibility of metrics for the entire facility



- In addition, the summary report has been modified to allow filtering the display according to the new subdivisions

REPORT: OEE Summary Table
Plant1
Start Date : 8/31/2022
End Date : 9/1/2022 1

| Date - Resource | Shift | Description | Lot | Prod/min | Production in UM base [Pz] | | | Time [hh:mm] | | | KPI | | | |
|-------------------|-------|----------------------|---------------|---------------|----------------------------|-------|--------|--------------|-------|-----------|----------|----------|-------|-------|
| | | | | | Gross | Goods | Scraps | No Prod | Run | Stop.Prod | Availab. | Perform. | Qual. | OEE |
| 2022-08-31 | | | | | 15887 | 15426 | 461 | 00:11 | 07:51 | 01:22 | | | | |
| LineFour | | | | | | | | | | | | | | |
| | 1 | L4R1 | B-20220831-01 | 32.55 | 772 | 752 | 20 | 00:00 | 00:21 | 00:03 | 87.4% | 49.7% | 97.4% | 42.3% |
| | 1 | L4R1 | D-20220831-01 | 31.05 | 3726 | 3630 | 96 | 00:02 | 01:40 | 00:18 | 84.8% | 49.7% | 97.4% | 41.0% |
| | 1 | L4R2 | F-20220831-01 | 23.72 | 1423 | 1384 | 39 | 00:01 | 00:50 | 00:09 | 84.8% | 25.1% | 97.3% | 20.7% |
| | 2 | L4R2 | F-20220831-01 | 23.69 | 2843 | 2761 | 82 | 00:02 | 01:40 | 00:18 | 84.8% | 25.1% | 97.1% | 20.6% |
| | 2 | L4R1 | H-20220831-02 | 31.04 | 3725 | 3610 | 115 | 00:02 | 01:40 | 00:18 | 84.8% | 49.7% | 96.9% | 40.8% |
| | 3 | L4R1 | H-20220831-02 | 28.2 | 3398 | 3289 | 109 | 00:04 | 01:40 | 00:16 | 86.1% | 45.2% | 96.8% | 37.7% |
| LineOne | | | | | 47014 | 45658 | 1356 | 00:11 | 08:02 | 01:11 | | | | |
| | 1 | L1R1 | A-20220831-01 | 102.38 | 2428 | 2364 | 64 | 00:00 | 00:21 | 00:03 | 87.4% | 96.3% | 97.4% | 81.9% |
| | 1 | L1R1 | C-20220831-01 | 99.77 | 11973 | 11624 | 349 | 00:02 | 01:42 | 00:16 | 86.5% | 96.5% | 97.1% | 81.0% |
| | | Not Configured Shift | L1R1 | C-20220831-01 | 0 | 0 | 0 | 00:00 | 00:00 | 00:00 | 100.0% | 0.0% | 0.0% | 0.0% |

Enhanced scheduling

- Added the ability to change holidays from runtime through a new screen accessible from the dashboard; from this new screen users can edit, delete or add holidays

Better scrap management

- Added a screen accessible from dashboards that allows changes to the scrap count on a given process
- Feature only accessible to users with higher level access, all of which can be configured in a table in the Pro.Lean database
- Comments can be added to any changes for tracking purposes

Certifications

Manual scraps management

Last processed lots

| Resource | Job code | Lot | Date | Shift | Total | Good | Scraps |
|----------|----------|---------------|-----------|----------------------|-------|-------|--------|
| LineOne | L1R1J1 | G-20220901-02 | 9/1/2022 | Shift 3 | 6922 | 6695 | 227 |
| LineOne | L1R1J1 | G-20220901-02 | 9/1/2022 | Shift 2 | 11971 | 11600 | 371 |
| LineOne | L1R2J2 | E-20220901-01 | 9/1/2022 | Shift 2 | 6058 | 5861 | 197 |
| LineOne | L1R2J2 | E-20220901-01 | 9/1/2022 | Shift 1 | 3021 | 2942 | 79 |
| LineOne | L1R1J1 | A-20220901-01 | 9/1/2022 | Shift 1 | 2352 | 2280 | 72 |
| LineOne | L1R1J1 | C-20220901-01 | 9/1/2022 | Shift 1 | 11992 | 11623 | 369 |
| LineOne | L1R1J1 | G-20220831-02 | 8/31/2022 | Shift 3 | 5553 | 5391 | 162 |
| LineOne | L1R1J1 | C-20220831-01 | 8/31/2022 | Shift 1 | 11973 | 11624 | 349 |
| LineOne | L1R1J1 | A-20220831-01 | 8/31/2022 | Shift 1 | 2428 | 2364 | 64 |
| LineOne | L1R1J1 | C-20220831-01 | 8/31/2022 | Not Configured Shift | 0 | 0 | 0 |
| LineOne | L1R1J1 | G-20220831-02 | 8/31/2022 | Not Configured Shift | 17975 | 17460 | 515 |
| LineOne | L1R2J2 | E-20220831-01 | 8/31/2022 | Not Configured Shift | 9085 | 8819 | 266 |
| LineOne | L1R2J2 | I-20220830-02 | 8/30/2022 | Shift 3 | 138 | 135 | 3 |
| LineOne | L1R1J1 | G-20220830-02 | 8/30/2022 | Shift 3 | 5517 | 5341 | 176 |
| LineOne | L1R1J1 | G-20220830-02 | 8/30/2022 | Shift 2 | 17925 | 17383 | 542 |
| LineOne | L1R1J1 | C-20220830-01 | 8/30/2022 | Shift 2 | 0 | 0 | 0 |
| LineOne | L1R2J2 | E-20220830-01 | 8/30/2022 | Shift 2 | 9082 | 8773 | 309 |
| LineOne | L1R1J1 | C-20220830-01 | 8/30/2022 | Shift 1 | 11961 | 11599 | 362 |
| LineOne | L1R1J1 | A-20220830-01 | 8/30/2022 | Shift 1 | 1910 | 1854 | 56 |
| LineOne | L1R1J1 | G-20220829-02 | 8/29/2022 | Shift 3 | 5784 | 5620 | 164 |
| LineOne | L1R1J1 | G-20220829-02 | 8/29/2022 | Shift 2 | 6396 | 6191 | 205 |
| LineOne | L1R1J1 | C-20220829-01 | 8/29/2022 | Shift 2 | 0 | 0 | 0 |
| LineOne | L1R2J2 | E-20220829-01 | 8/29/2022 | Shift 2 | 9082 | 8806 | 276 |
| LineOne | L1R1J1 | A-20220829-01 | 8/29/2022 | Shift 1 | 2468 | 2397 | 71 |
| LineOne | L1R1J1 | C-20220829-01 | 8/29/2022 | Shift 1 | 11985 | 11638 | 347 |

New Scraps: Notes:

- The Movicon.NExT 4.2 platform has been accorded the following critical certification: IEC 62443-3-3 Industrial communication networks – Network and system security – Part 3-3: System security requirements and security levels

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