Elipse E3 Release Notes

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CHAPTER 1 Introduction

Thanks for choosing **Elipse Software** products! We are proud to offer the best solution for your needs.

Elipse E3's new version **6.6** presents new tools and resources that focus on the development of control and supervisory applications. This document contains information about these resources.

For any additional information, please contact us by phone at **(+55 51) 3346-4699** in **Brazil** or at **(+886 7) 323-8468** in **Taiwan**. You can also contact us by e-mail at *suporte-br@elipse.com.br*.

Version 6.6

This section contains updates of version **6.6** of **Elipse E3**. To check all updates of this version, please refer to the next topics of all Builds or, to check updates of a Build relative to a previous one, please refer to that specific topic.

2.1 Version 6.6 Build 292

This section contains updates of version **6.6.292** of **Elipse E3** relative to version **6.5.164**.

2.1.1 New Features

This section contains new implementations in version **6.6.292** of **Elipse E3**.

2.1.1.1 Alarm Server and Alarm Configuration

- Added a new Alarm Field, **AlarmState**, which indicates the state of an Alarm on a certain moment.
- Added the **ConditionName** property on Alarm Sources, read-only.
- Added the methods **Shelve** and **Unshelve** in Alarm Sources to shelve and unshelve an Alarm, as well as the **Shelved** property, which indicates whether an Alarm Source is shelved or not.

2.1.1.2 Database

- Now Historic objects stored on databases in **MySQL** format store timestamps with a precision of up to 1 (one) millisecond.
- Now using ADO Oracle Driver is recommended by default.
- Now the version of the ODBC Driver used in the connection with PostgreSQL and MySQL databases is added to logs.

2.1.1.3 Demo Application

- Updated the **Elipse E3**'s demonstration application with **HighPerformance Template Library** version 2.5.

2.1.1.4 Documentation

- Added information on Tutorials and on **Elipse E3 User's Manual** about other trainings offered by **Elipse Software**.
- Updated the exercise about users on chapter **Users** of **Elipse E3 Tutorial Advanced**.
- Added documentation and images of contextual menus of TrendAnalysis on **Elipse E3 User's Manual**.
- Added information on **Elipse E3 User's Manual** about the procedure to import OPC UA Tags in an OPC UA Driver.
- Updated the exercises of chapter **Security and Users** of **Elipse E3 Tutorial Developer** to reflect the new behavior of the **This user is an administrator** option.

2.1.1.5 Domain, E3 Server, and Hot-Standby

- Fixed a deadlock that could occur in **E3 Server** when an application tries to access data from the **[?Server]** node and its respective children. Also implemented a periodical log of statistics of object marshaling in **Elipse E3** processes.
- Improved performance of sending syncing data from databases between **Hot** and **Standby** servers. Created statistical logs for database queue operations (e3i and e3o files).
- Removed the customization of DCOM settings from **E3 Server**.

2.1.1.6 E3 Admin

- Now security properties are grouped on an exclusive item on Domain options of **E3 Admin**.
- Added a new section with Domain properties related to compatibility with earlier versions.

2.1.1.7 E3 Tweak

- Created Sections **FullUa** and **FullOpc** for **Full** logs of **Elipse E3**'s OPC UA and OPC DA Clients, respectively.
- Added the **Inactivity** Module, to enable debugging logs for the function to detect **Elipse E3 Viewer** inactivity.

2.1.1.8 E3Alarm

- Added the Alarm Field **ShelvedExpirationTime**, which indicates the programmed date for a shelved Alarm to leave that condition.

2.1.1.9 E3Browser

- Added the **ShowToolbar** property, which allows hiding or showing an E3Browser's toolbar.
- Now users can remove the sorting order of a column in an E3Browser.
- Now users can select the sorting order of columns in an E3Browser via script or runtime property.

2.1.1.10 E3Chart

- Minimized synced queries for Storage's Automatic Pens.

2.1.1.11 Elipse Event Log

- Logs reporting slow operations, that is, **W00550**-type warnings, now include the exact time these operations started. **Elipse Event Log** also adds this information in logs, if not available.

2.1.1.12 Installation

- Now the **Elipse E3 Viewer** installer also installs **E3 Tweak**.
- Installers **Full** of **Elipse E3** and **Elipse E3 Viewer** now install the necessary files for the new Section Report. Also, .NET 4.8 is now a requirement for all installers.
- Now the installers of Elipse E3 and Elipse E3 Viewer require Windows 10 or later or Windows Server 2016 or later.
- General improvements on installers and updated icons.
- Integrated eeLogs version 4.5.259.
- Updated MySQL ODBC Driver to version 8.0.33.
- Updated PostgreSQL ODBC Driver to version 15.0.
- Updated SQL Server OLE DB Driver to version 18.6.6.
- Updated the installer of HKCustomer to version 6.0.85.

2.1.1.13 Interface

- Standardized the texts of some classes of objects.
- Standardized the name of the product **Elipse E3** and the name of the sub-products **Elipse E3 Studio** and **Elipse E3 Viewer**.
- **Elipse E3**, **Elipse Power**, and **Elipse Water** now have new icons for products.
- Standardized the texts of tips in buttons of dialog boxes.

2.1.1.14 Links

- Created logs of statistics for events of Links that travel from **E3Run** to **E3 Server**.
- Created periodical logs about the management of Links on **E3 Server**.
- Created more statistical logs and warnings to detect possible delays when handling Link events, that is, notifications of changes in properties.

2.1.1.15 OPC DA Client

- Created the properties **ServerMachine2** and **ActiveServer** in the OPC Driver object, which implement support for server redundancy.

2.1.1.16 OPC DA Server

- Improved the performance of adding items and a statistical log on the OPC DA Server.

2.1.1.17 OPC UA Driver and OPC UA Client

- Added periodical logs of connection failures of **Elipse E3**'s OPC UA Client and revised the **Full** log Sections of **Elipse E3**'s OPC UA and OPC DA Clients.

2.1.1.18 OPC UA Server

- Implemented an OPC UA Server in **Elipse E3**.

2.1.1.19 Other Implementations

- Increased the default stack size to 2 (two) MB in 64-bit processes of **Elipse E3**.
- Renamed the executable files of **Elipse E3 Viewer**, **Elipse E3 Studio**, and I/O Server.
- Implemented a mechanism to recover performance in threads loaded from **Elipse E3** in systems with hybrid CPUs.

2.1.1.20 Protection Device

- Updated the installer of HASP drivers (haspdinst) to version 9.14.
- Changed the license's expiration messages to indicate the number of remaining days, hours, and minutes.
- Now an **E3 Server** in **Demo** mode with a borrowed Studio license provides the runtime keys from the server that performed the lending.

2.1.1.21 Query

- Created the Query Application Hierarchy (*AppXQuery*) object, which allows editing, testing, and executing **XQuery**-type queries. The global function **XQuery** is now visible and accessible to users.

2.1.1.22 Reports

- Now a warning is displayed to users indicating that the Report object was deprecated.
- Added a new Report Section object in **Elipse E3 Studio**.

2.1.1.23 Screen Objects

- Implemented a mechanism to truncate coordinates of Screen objects that remain off the possible limits of drawing.

2.1.1.24 Scripts

- Created the **AckFailure** method in the Application object of **E3 Server**.

2.1.1.25 Security

- The windows to create and edit Windows users and groups now have the name of the element registered in **Elipse E3** separated in a field for the Windows domain and another field for the user's name.
- Now the **Members** tab for Windows users on the window to create users and groups only loads the list of members when clicking the **Refresh** option.
- Implemented the Domain's Default Permissions node on the Users and Groups window.
- Added more **Full**-type logs detailing the steps to load Windows users and groups.

2.1.1.26 Studio

- Updated the image of the splash screen of **Elipse E3 Studio**.

2.1.1.27 TrendAnalysis

- Added a new cursor to differentiate the selection of periods from the other selection modes.

2.1.2 Fixed Bugs

This section contains bugs fixed in version **6.6.292** of **Elipse E3**.

2.1.2.1 Alarm Server and Alarm Configuration

- Fixed a problem that allowed the Alarm Summary to be persisted with a time less than the minimum allowed. *This bug occurred since v5.5.170.*
- Fixed the load of properties indicating the severity of Alarms, allowing only valid values. *This bug occurred since v5.1.191.*
- Fixed a problem that prevented shelving or unshelving unshelved alarms. *This bug occurred since v5.5.87.*

2.1.2.2 CFR21

- Fixed a memory leak in **E3 Server** during a change on the user's database. *This bug occurred since v4.8.324*.

2.1.2.3 Database

- Storage and Playback Queries in Oracle databases now should work correctly. *This bug occurred since v2.5.11*.
- Now the connection test with an Oracle database better reflects how this connection works with this type of database.

2.1.2.4 Documentation

- Added information on **Elipse E3 User's Manual** about the procedure of importing OPC UA Tags on an OPC UA Driver. *This bug occurred since v4.8.186*.

2.1.2.5 Domain, E3 Server, and Hot-Standby

- Fixed a GPF in **E3 Server** when many Viewers closed themselves at the same time. *This bug occurred since v5.5.150*.
- Fixed a memory leak in **E3 Server** relative to Domain's file information. *This bug occurred since v6.5.3*.
- Fixed a memory leak in **E3 Server** when changing the password of a logged-in user via **Elipse E3 Studio**. *This bug occurred since v6.5.13*.

2.1.2.6 E3Browser

- Fixed a GPF when using the **Requery** method of a Query in an E3Browser. *This bug occurred since v6.5.81*.
- Fixed a GPF that occurred if a reference to an E3Browser Field was stored before deleting that E3Browser, as long as the Fields were scanned again before deleting the E3Browser. *This bug occurred since v0.1.20*.
- Now an E3Browser has its selection of cells correctly reset when returning to a Screen. *This bug occurred since v5.6.21*.
- Now the mouse's right button only selects the clicked cell. *This bug occurred since v5.6.21*.

2.1.2.7 E3Chart

- Now an E3Chart does not remain on a *loading* status when its query ends. *This bug occurred since v6.5.129*.
- Fixed the search and replace tool to not search hidden properties on collections of objects. *This bug occurred since v3.2.112*.

2.1.2.8 Installation

- Now the installers evaluate the minimum required operating system before removing the previous version. *This bug occurred since v4.5.7*.
- Now the installation does not fail anymore in case an optional third-party component returns a failure, users are only informed by a message and the installation proceeds. *This bug occurred since v6.5.38*.

2.1.2.9 Links

- **Elipse E3** expressions now handle correctly variables with the names **AddRef**, **Release**, **QueryInterface**, **GetTypeInfoCount**, **GetTypeInfo**, **GetIDsOfNames**, and **Invoke**. *This bug occurred since v1.0.15*.

2.1.2.10 OPC DA Client

- Fixed a problem in **Elipse E3**'s OPC DA Client of a failure when initially registering Tags in an OPC DA Server. *This bug occurred since v4.6.46*.
- Now the **Elipse E3**'s OPC DA Client tries to recreate the subscriptions when the OPC DA Server changes to the **Running** state. *This bug occurred since v1.0.16*.
- Now the **Elipse E3**'s OPC DA Client, when registering as a service, adds the local or remote access permissions **Everyone**, **System**, **Network**, and **Interactive**. *This bug occurred since v4.6.73*.

2.1.2.11 Scripts

- Fixed a GPF in **E3Run** when a client executed a **For Each** instruction in server objects that are unloaded. *This bug occurred since v6.0.135*.

2.1.2.12 Security

- Fixed an error when loading numeric properties saved in versions previous to version 5.0. *This bug occurred since v6.5.4.*
- The tree of Users and Groups is now always sorted. *This bug occurred since v6.5.4.*
- Now, when loading a list of members of a local group, the users from external domains belonging to that group have their paths correctly loaded and the list does not show anymore members that are not users. *This bug occurred since v5.6.36.*
- The **Disable permissions check** option was added to the configuration window of the Domain of **E3 Admin**, on the **Properties** tab. *This bug occurred since v6.5.4.*
- Reduced the loading time of the window to configure users and groups in remote **Elipse E3 Studios** and **Elipse E3 Viewers**. *This bug occurred since v6.5.4.*
- Now the only acceptable format for registering Windows users and groups in **Elipse E3** is the **NetBIOS** (*DOMINIO\usuario*) format. Older registrations will be updated. *This bug occurred since v5.6.71.*
- Fixed a small memory leak in **E3 Server** during the process of loading users in their respective groups. *This bug occurred since v6.5.55.*
- Performed optimizations when handling Windows users and groups. *This bug occurred since v5.6.71.*
- Now opening a Domain with many Windows groups or users must not have the same performance of a Domain without users or groups of the same type. *This bug occurred since v5.6.71.*
- Fixed a memory leak on the **Permissions** tab of the Users and Groups window on **Elipse E3 Studio**. *This bug occurred since v6.5.4.*
- Using Viewer's **IsUserMemberOfGroup** method is now allowed for Windows users registered only via Windows groups. *This bug occurred since v5.6.71.*
- Removed the double confirmation to remove Windows users using the **Members** tab of a Windows group. *This bug occurred since v6.5.4.*
- Removed the options **Move Up** and **Move Down** from the **Groups** tab of users and groups on the Users and Groups window. *This bug occurred since v6.5.162.*

2.1.2.13 Studio

- Fixed a small memory leak when changing the font of an object in **Elipse E3 Studio**. *This bug occurred since v0.1.26.*

2.1.2.14 Translation

- Fixed the term *Round Rectangle* to *Rounded Rectangle* on a Screen's toolbar.
- Fixed use cases of the article *a* or *an* on several texts.

2.1.2.15 TrendAnalysis

- Keyboard shortcuts 0 (zero), + (plus), and - (minus) now work not only by the numerical keypad. *This bug occurred since v6.0.187.*
- Fixed a GPF in Viewer when stopping an application in which a window contains a TrendAnalysis. *This bug occurred since v5.0.27.*
- Fixed the querying of time periods as these periods are viewed. *This bug occurred since v6.0.91.*
- Improved the performance of applications performing a view movement in TrendAnalysis with many Storage Pens. *This bug occurred since v6.0.197.*

2.1.2.16 Undo Command

- Fixed a memory leak when using the **Undo** command in **Elipse E3 Studio**. *This bug occurred since v5.0.261.*

2.1.2.17 Viewer

- Fixed an inconsistency when using the **UserAdministration** method, depending on the combination of versions of **Elipse E3 Viewer** and **E3 Server**, in which may have different edition permissions. *This bug occurred since v6.5.28.*

CHAPTER 3 Version 6.5

This section contains updates of version **6.5** of **Elipse E3**. To check all updates of this version, please refer to the next topics of all Builds or, to check updates of a Build relative to a previous one, please refer to that specific topic.

3.1 Version 6.5 Build 164

This section contains updates of version **6.5.164** of **Elipse E3** relative to version **6.5.162**.

3.1.1 Fixed Bugs

This section contains bugs fixed in version **6.5.164** of **Elipse E3**.

3.1.1.1 E3Alarm

- Fixed a problem that prevented shelving or unshelving unbounded alarms. *This bug occurred since v5.5.87*.

3.1.1.2 Scripts

- Fixed a GPF in **E3Run** that happened when a client executed a **For Each** instruction in server objects that are unloaded. *This bug occurred since v6.0.135*.

3.2 Version 6.5 Build 162

This section contains updates of version **6.5.162** of **Elipse E3** relative to version **6.5.161**.

3.2.1 Fixed Bugs

This section contains bugs fixed in version **6.5.162** of **Elipse E3**.

3.2.1.1 Other Implementations

- Fixed the recording of statistics of occupancy of threads in **Elipse E3** logs. *This bug occurred since v6.5.116*.

3.2.1.2 Studio

- Fixed a GPF in **Elipse E3 Studio** when closing a Screen that contains XControls with internal Links. *This bug occurred since v0.1.33 (Beta)*.

3.3 Version 6.5 Build 161

This section contains updates of version **6.5.161** of **Elipse E3** relative to version **6.5.155**.

3.3.1 Fixed Bugs

This section contains bugs fixed in version **6.5.161** of **Elipse E3**.

3.3.1.1 Alarm Server and Alarm Configuration

- Now the maximum time for shelving must be respected also via script. *This bug occurred since v5.5.82*.

3.3.1.2 Domain, E3 Server, and Hot-Standby

- Fixed a deadlock in **E3 Server** during an attempt of accessing the **?Server** item and its respective children. *This bug occurred since v6.5.103*.

3.3.1.3 E3Alarm

- Fixed the E3Alarm redrawing, so that it does not blink so much when alarms vary with a high frequency. *This bug occurred since v1.0.0*.

3.3.1.4 Query

- Fixed a problem of not releasing licenses of Viewers from previous versions that trigger long-lasting asynchronous queries. *This bug occurred since v6.5.81*.

3.3.1.5 TrendAnalysis

- Fixed a problem that prevented Tags historized by a Storage to have their historical data plotted. *This bug occurred since v6.5.102.*

3.3.1.6 Users

- Fixed the **Password** property of a user in the **[?Server].Security.Users** item, which is a write-only property. *This bug occurred since v6.5.103.*

3.4 Version 6.5 Build 155

This section contains updates of version **6.5.155** of **Elipse E3** relative to version **6.5.152**.

3.4.1 Fixed Bugs

This section contains bugs fixed in version **6.5.155** of **Elipse E3**.

3.4.1.1 Alarm Server and Alarm Configuration

- Now users can configure the maximum time for alarm shelving for up to 9999:59. *This bug occurred since v5.5.82.*

3.5 Version 6.5 Build 152

This section contains updates of version **6.5.152** of **Elipse E3** relative to version **6.5.151**.

3.5.1 Fixed Bugs

This section contains bugs fixed in version **6.5.152** of **Elipse E3**.

3.5.1.1 Domain, E3 Server, and Hot-Standby

- Fixed a GPF in **E3 Server** during the process of disconnecting from a remote Domain.

3.5.1.2 Links

- Fixed a possible deadlock in **E3Run** during the process of destructing Links. *This bug occurred since v3.0.201.*

3.6 Version 6.5 Build 151

This section contains updates of version **6.5.151** of **Elipse E3** relative to version **6.5.150**.

3.6.1 Fixed Bugs

This section contains bugs fixed in version **6.5.151** of **Elipse E3**.

3.6.1.1 Domain, E3 Server, and Hot-Standby

- Fixed an unexpected closing of **E3 Server** that could occur when modifying a Domain file.

3.6.1.2 Users

- Fixed the forced password change and the warning of password expired. *This bug occurred since v6.5.88.*
- Fixed the possibility of always changing an expired password for administrators. *This bug occurred since v6.5.19.*

3.7 Version 6.5 Build 150

This section contains updates of version **6.5.150** of **Elipse E3** relative to version **6.1.101**.

3.7.1 New Features

This section contains new implementations in version **6.5.150** of **Elipse E3**.

3.7.1.1 Alarm Server and Alarm Configuration

- Added an option to copy and paste User Fields in objects in **Elipse E3 Studio**.
- Implemented the suppression of alarms by design, according to ANSI ISA 18.2 standard.
- Implemented counters for suppressed alarms.

- Added a Field that stores a sequential index of the moment of an Alarm Event, only on the database.

3.7.1.2 CFR21

- Registration of user events now indicates on all messages in which computer that event occurred.

3.7.1.3 Database

- **Elipse E3** now has native support for MySQL databases.
- **Elipse E3** now has native support for PostgreSQL databases.

3.7.1.4 Documentation

- Added more information about the behavior of OPC UA Driver's **MaxNodesPerClientCall** property on **Elipse E3 Reference and Scripts Manual**.

3.7.1.5 Domain, E3 Server, and Hot-Standby

- Log messages from an **EPM** connection of Automatic Pens were improved to differentiate communication errors about Interface names not found.
- Created a [?Server].Domain.Files object in **E3 Server**, in which users can access information about project, library, and package files that compose a Domain.

3.7.1.6 Drivers and I/O Server

- Updated the Elipse Tools library (files et32b.dll and et64b.dll) to version 4.0.

3.7.1.7 E3 Admin

- Added an option to test the connection with an **EPM** server on the configuration of Automatic Pens of a Domain.

3.7.1.8 E3 Tweak

- Implemented support for periodical profiling statistics of processes of **Elipse E3** in **E3 Tweak**.
- Implemented an option to force the capture of handled exceptions.

3.7.1.9 E3Chart

- Searching for Automatic Pens with data from an **EPM** server is now performed asynchronously.
- Now requests for Tags from Remote Domains are handled first on the local Domain.

3.7.1.10 Installation

- Integrated eeLogs version 4.5.209.
- Added an installation option for ODBC MySQL Driver on the **Full** installer of **Elipse E3** and also performed an update of Visual C++ Redistributable Package, when needed.
- Added an installation option for ODBC PostgreSQL Driver on the **Full** installer of **Elipse E3**.
- Now the installers of **Elipse E3** and **Elipse E3 Viewer** suggest the installation of Microsoft Edge WebView2 Runtime, if not installed.

3.7.1.11 OPC UA Driver and OPC UA Client

- Allowed writing in OPC UA Client of items that cannot be registered for reading.
- Implemented the security profiles **Aes128_Sha256_RsaOaep** and **Aes256_Sha256_RsaPss** in the OPC UA Driver's **SecurityPolicy** property.

3.7.1.12 Other Implementations

- Implemented an option for periodical profiling statistics of processes in **Elipse E3**.
- The recommended operating systems for **Elipse E3** are **Windows 10** or later and **Windows Server 2012 R2** or later.

3.7.1.13 Query

- Sending asynchronous queries now have a better performance, specially when sending multiple simultaneous queries.

3.7.1.14 Studio

- Added a shortcut to **Elipse E3 Reference and Scripts Manual** on the **Help** menu of **Elipse E3 Studio**.

3.7.1.15 TrendAnalysis

- Data columns from the **Displays** tab of Tasks View now have a smaller default size.
- The **Displays** tab of Tasks View now have more column options for displaying data.
- Now TrendAnalysis lists Tags from remote historics.

3.7.1.16 Users

- Administrators now have all permissions enabled and this cannot be changed.
- The User Administration window of **Elipse E3 Viewer** can now be opened by all users having a **Configure users/groups** permission enabled.
- Removing the last administrator of a Domain or turning them into non-administrators is not possible anymore. Administrators are not blocked from executing a login due to a disabled or blocked account and they can always change their password when expired. If there is no administrator configured in a Domain, when trying to edit users, an administrator must be created first.
- Non-administrator users cannot edit administrators or promote other users or themselves to administrator.
- Changed the interface of the User Permissions window of **Elipse E3 Studio** and the Users Administration window of **Elipse E3 Viewer**. Now users can also configure groups in **Elipse E3 Viewer**.
- The text of security properties now always show the value used. If this value is inherited from a group to which the user belongs, or from the Domain configuration, the text "(inherited)" is displayed near the value. If the property's default value is used, the text "(by default)" is displayed near the value.
- Added the **Security** node to the **?Server** object. This node contains a collection of groups, **Groups**, and a collection of users, **Users**. Users have the properties **Name**, **FullName**, **IsAdministrator**, **Password**, and **Type**. Groups have the properties **Name** and **Type**. Both have the methods **AddToGroup** and **RemoveFromGroup**.

3.7.1.17 Viewer

- Integrated WebView2 control as the new rendering engine of Web content.

3.7.2 Fixed Bugs

This section contains bugs fixed in version **6.5.150** of **Elipse E3**.

3.7.2.1 CFR21

- Fixed the handling of login on the window displayed by Viewer's **ESign** method. *This bug occurred since v1.20.450.*

3.7.2.2 Database

- Now users can create tables and fields using all characters allowed by Oracle databases. *This bug occurred since v2.0.27.*
- Now users are allowed to use the closing bracket (]) character on identifiers of SQL Server databases. *This bug occurred since v2.0.25.*

3.7.2.3 Domain, E3 Server, and Hot-Standby

- Removed from the log unneeded messages of *unmarshaling failed* with code 80004005 (E_FAIL). *This bug occurred since v6.0.121.*
- Fixed a possible GPF or unexpected close of **E3 Server** while opening a Domain. *This bug occurred since v6.1.53.*

3.7.2.4 Drivers and I/O Server

- Fixed a failure in **E3Run** or **Elipse E3 Studio** that could occur when stopping an I/O Driver. *This bug occurred since v1.19.145.*

3.7.2.5 E3 Tweak

- **E3 Tweak User's Manual** in **CHM** format now opens when using the F1 key on **E3 Tweak**'s main window. *This bug occurred since v4.0.229.*

3.7.2.6 E3Chart

- Fixed the update of automatic scales after applying a vertical fit. *This bug occurred since v5.0.191*.
- Changes in properties of Automatic Pens are now applied with the Domain executing. *This bug occurred since v5.0.270*.
- Fixed the behavior of the Automatic Query of a Historical Pen when defining the title for the **E3TimeStamp** Field. *This bug occurred since v5.1.0*.

3.7.2.7 Frame

- Now users can write to the **SplitValue** property of Splitters using different measurement units at run time, as it has been already allowed in **Elipse E3 Studio**.

3.7.2.8 OPC UA Driver and OPC UA Client

- Fixed the concatenation of the **ItemID** property of OPC UA Tags during the import process. *This bug occurred since v4.5.166*.
- Fixed a GPF in the OPC UA Client when a user's password is too long and cryptography is enabled. *This bug occurred since v4.5.176*.

3.7.2.9 Other Implementations

- Fixed a problem when generating dump (.dmp) files when two or more simultaneous exceptions occurred in different threads. *This bug occurred since v6.0.73*.
- The interface to edit Event Recordings now validates and instructs about the usage of macros. *This bug occurred since v3.0.456*.
- Changed the notification of **E3 Server** clients to support reentrant calls.
- Fixed the name of the Windows Registry Key from where the configuration of logs **ProcessInfo.<*process*>**, **HeapLog.<*process*>**, and **Profile.<*process*>** is read. Now, there is no need to add an **x64** suffix to 64-bit processes. *This bug occurred since v4.6.114*.

3.7.2.10 Query

- Fixed the display of the **Help** column on the **Variables** tab of the configuration window of Queries. *This bug occurred since v6.0.146*.
- The generator of SQL code of Queries now correctly delimits names of fields and tables containing special characters. *This bug occurred since v1.21.142*.

3.7.2.11 Screen Objects

- Fixed the resizing or moving of XControls and groups in **Elipse E3 Studio**. *This bug occurred since v6.0.215*.
- Fixed a GPF in **Elipse E3 Studio** or **Elipse E3 Viewer** due to Links that combine both **X** and **Width** properties of an object. *This bug occurred since v6.0.43*.
- Fixed the behavior of **Elipse E3 Studio** when resizing an XControl or group using the mouse. *This bug occurred since v6.0.43*.
- Fixed the redrawing of a Screen when using the **MaximizeFrame** method on the **OnShow** event of that Screen. *This bug occurred since v5.0.416*.

3.7.2.12 Studio

- Now **Frame**-type objects are opened on the **Design** tab. *This bug occurred since v5.0.204*.

3.7.2.13 TrendAnalysis

- Implemented a correction to prevent a TrendAnalysis' data source to send more data than needed to perform a drawing. *This bug occurred since v6.0.91*.
- Displays do not show anymore the value "-(nan)ind" for average, maximum, and minimum values in case there is no points. *This bug occurred since v6.1.80*.
- Points generated by interpolation are no longer considered for calculating average, maximum, and minimum values of a Pen. *This bug occurred since v6.0.197*.

- Implemented a correction in the update of data and drawing of a Pen when the source is asynchronous and with a lot of historical data. *This bug occurred since v6.0.197.*
- Columns persisted on a Display, saved in a language, and then opened in an **Elipse E3** with a different language are no longer displayed. *This bug occurred since v6.0.187.*
- Removed the **Include Begin and End Period** option from the **Export to CSV** window. *This bug occurred since v6.0.197.*
- The manager of Automatic Pens must route remote Tags to their respective Domain. *This bug occurred since v6.0.197.*

3.7.2.14 Users

- Errors occurred when applying changes to the Users window in **Elipse E3 Studio** and to the dialog box of Viewer's **UserAdministration** method are now correctly informed to users. *This bug occurred since v6.0.45.*
- Fixed the communication to sessions about all name changes of the logged-on user. *This bug occurred since v6.0.14.*
- Fixed the error message for a password not complying to requirements when number values are the standard. *This bug occurred since v6.0.109.*
- Fixed a problem of user recognition when changing their password, which prevented using permissions in this condition. When users change their password, a logout is performed in all sessions, except in the session that performed this change. *This bug occurred since v4.5.252.*
- The operation to change a security property now fails on the server if it generates a conflict, for users and groups and for Domain options. The operation to add a user or group to a group fails on the server if it generates a conflict on the security properties. The order of groups to which a user or group belongs now reflects the priority order of the inheritance of properties. *This bug occurred since v3.0.115.*

3.7.2.15 Viewer

- Fixed the information about the list of servers on the help window of Viewer's command prompt. *This bug occurred since v3.1.110.*

Version 6.1

This section contains updates of version **6.1** of **Elipse E3**. To check all updates of this version, please refer to the next topics of all Builds or, to check updates of a Build relative to a previous one, please refer to that specific topic.

4.1 Version 6.1 Build 101

This section contains updates of version **6.1.101** of **Elipse E3** relative to version **6.1.98**.

4.1.1 Fixed Bugs

This section contains bugs fixed in version **6.1.101** of **Elipse E3**.

4.1.1.1 OPC UA Driver and OPC UA Client

- Fixed the connection of the OPC UA Client using the **Basic256Sha256** security policy. *This bug occurred since v4.8.5*.

4.2 Version 6.1 Build 98

This section contains updates of version **6.1.98** of **Elipse E3** relative to version **6.1.90**.

4.2.1 New Features

This section contains new implementations in version **6.1.98** of **Elipse E3**.

4.2.1.1 E3Alarm

- Created the **ShowIcon** property in E3Alarm, which allows hiding the icon on the first column of events.

4.2.1.2 Installation

- Updated the installer of HKCustomer to version 6.0.73.

4.2.1.3 Protection Device

- Updated the installer of HASP drivers (haspdinst) to version 8.43.

4.3 Version 6.1 Build 90

This section contains updates of version **6.1.90** of **Elipse E3** relative to version **6.0.215**.

4.3.1 New Features

This section contains new implementations in version **6.1.90** of **Elipse E3**.

4.3.1.1 Database

- Added the **AccessSetDBPassword** method and the properties **OracleUseADODrivers**, **OracleEnableTimestamp**, **MsSQLNetworkLibrary**, **MsSQLProvider**, **UseCustomConnectionString**, and **CustomConnectionString** to the Database object for configuring a Database via script.

4.3.1.2 Domain, E3 Server, and Hot-Standby

- Changed the behavior of **Elipse E3**'s Hot-Standby mechanism, so that a single **ping** failure does not consider the network as out of operation immediately.
- Implemented a stop logic for a standby server when the Hot-Standby mechanism is turned off *hot*.
- Created the **Refresh** and **Stop** methods in the ?Server.Domain object.
- Implemented writing on the **Disabled** property of objects ?Server.Domain.Servers.LocalServer and ?Server.Domain.Servers.RemoteServer.

4.3.1.3 E3 Admin

- Added the **EnableProjects** and **DisableProjects** options to enable and disable, respectively, projects via command line in **E3 Admin**.

- The **E3 Admin**'s contextual menu on Windows Notification Area received icons on most commands and options, as well as icons on the respective windows of these commands and options.
- Added the **EnableServer** and **DisableServer** options to enable and disable, respectively, servers via command line in **E3 Admin**.

4.3.1.4 E3 Tweak

- Implemented an option to register *MiniDumpFlags* in exception capture.

4.3.1.5 Installation

- Updated the installer of HKCustomer to version 6.0.68.
- Updated SQL Server OLE DB Driver to version 18.6.3.
- Integrated eeLogs version 4.5.190.
- The **Elipse E3** installer now informs whether the installation failed due to the need to restart the computer to install **Elipse Event Log**.

4.3.1.6 Other Implementations

- Standardized the spelling of the word "Domain" in **Elipse E3** logs and console messages.
- Added a key in Windows Registry to allow customizing information contained in minidump files.

4.3.1.7 Protection Device

- Updated the installer of HASP drivers (haspdinst) to version 8.31.

4.3.1.8 Studio

- Added the **Defragment All Files** option to Organizer's contextual menu to defragment all files from a Domain.
- The defragmentation tool now can be applied to files open in **Elipse E3 Studio**.
- Created a command to refresh a Domain in **Elipse E3 Studio**'s toolbar.
- Changed the command to execute a Screen on **Elipse E3 Viewer** to save and refresh an application.

4.3.1.9 TrendAnalysis

- Improved TrendAnalysis support for displays with scale levels greater than 100%.
- Tags are now retrieved automatically after leaving an error situation.
- Implemented horizontal scroll bars on the **Connections** and **Bookmarks** tabs.
- Added support for more quality values from OPC standard.
- Now users can remove Plot Areas in any order via contextual menu of a Display.
- Error messages when loading files in TrendAnalysis' **XML** format are now more detailed.
- TrendAnalysis now allows users to select a scale of size for visual elements.
- Standardized the display of values and qualities in search modes.
- The file in **CSV** format exported by TrendAnalysis now indicates fields in more details.
- Added methods **AddPen**, **AddDisplay**, and **AddPlotArea** to the TrendAnalysis object.
- Added a column with the average value of a Pen on the Pens area of the **Displays** tab.
- Now users can add horizontal and vertical guide lines in TrendAnalysis.

4.3.2 Fixed Bugs

This section contains bugs fixed in version **6.1.90** of **Elipse E3**.

4.3.2.1 Alarm Server and Alarm Configuration

- Reviewed the infrastructure of alarms in the server for more robustness. *This bug occurred since v1.20.240*.

4.3.2.2 Documentation

- Fixed the code examples of Viewer's **ESign** and **TrackEvent** methods on **Elipse E3 Reference and Scripts Manual**.
- Updated the topic about Digital Links on **Elipse E3 User's Manual** and updated several figures and texts about Links on several documents of **Elipse E3**. *This bug occurred since v1.20.312*.

- Added the **Critical** option in the description of the *Severity* parameter of the **AddSubCondition** method of the Collection of Subconditions of a Discrete Alarm Source on **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v5.5.100.*
- Fixed the description of TrendAnalysis' **Load** method on **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v6.0.133.*
- Fixed the description of Viewer's **ShowTrendAnalysis** method on **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v6.0.182.*
- Fixed the initial text of topic **E3DataAccess Library** on **Elipse E3 User's Manual** to remove the information that this library uses a Viewer license. *This bug occurred since v4.5.211.*
- Fixed the name of the **Keep Last Search Point** option on the **Available options on the Search mode** table of topic **TrendAnalysis - Display Area** on **Elipse E3 User's Manual**. *This bug occurred since v6.0.177.*

4.3.2.3 Domain, E3 Server, and Hot-Standby

- Fixed the possibility of an **E3Run** deadlock when closed with Viewers still connected.
- Fixed the behavior when removing the only project from a Domain while it is still executing. *This bug occurred since v1.20.303.*
- Fixed a performance issue when reactivating destination objects with many Links, or when deactivating objects with disconnected Links. *This bug occurred since v0.1.24 (Beta).*

4.3.2.4 Drivers and I/O Server

- Fixed a problem that could cause a GPF (*General Protection Failure*) in **E3Run** when deactivating a Driver. *This bug occurred since v4.5.81.*

4.3.2.5 E3Chart

- Automatic Pens from Tags that do not show variation now keep the value and quality regarding the last variation. *This bug occurred since v5.6.31.*

4.3.2.6 Installation

- In case of failure during the installation of Microsoft OLE DB Driver for SQL Server, a message is logged and displayed to users, informing that a problem occurred during this module's installation, but the installation of **Elipse E3** continues normally. *This bug occurred since v6.0.134.*

4.3.2.7 Other Corrections

- Fixed the comparison between NAN (*Not A Number*) values and other values.

4.3.2.8 Studio

- Added an option to defragment protected files to Organizer's contextual menu. *This bug occurred since v4.0.197.*
- Fixed a GPF in **Elipse E3 Studio** when canceling the closing of a library package. *This bug occurred since v5.1.38.*
- Removed invalid options from the **Window** menu in **Elipse E3 Studio**. *This bug occurred since v3.0.456.*

4.3.2.9 TrendAnalysis

- Fixed a memory leak that could occur when closing an instance of TrendAnalysis. *This bug occurred since v6.0.187.*
- TrendAnalysis now correctly indicates if there is an error when loading a file in **XML** format. *This bug occurred since v6.0.197.*
- The option to export to **CSV** format now works correctly. *This bug occurred since v6.0.197.*
- Fixed a GPF (*General Protection Failure*) that could occur when removing pens via keyboard. *This bug occurred since v6.0.197.*
- Fixed a possible failure when browsing Tags of a connection. *This bug occurred since v6.0.197.*
- The drawing of the column with the name of a Pen does not overlap anymore the other columns of the Penas area on the **Displays** tab. *This bug occurred since v6.0.197.*

Version 6.0

This section contains updates of version **6.0** of **Elipse E3**. To check all updates of this version, please refer to the next topics of all Builds or, to check updates of a Build relative to a previous one, please refer to that specific topic.

5.1 Version 6.0 Build 215

This section contains updates of version **6.0.215** of **Elipse E3** relative to version **6.0.213**.

5.1.1 Fixed Bugs

This section contains bugs fixed in version **6.0.215** of **Elipse E3**.

5.1.1.1 Demo Application

- Fixed the positioning of icons of the demo application of **Elipse E3**. *This bug occurred since v6.0.43*.

5.1.1.2 Screen Objects

- Fixed the behavior of groups and XControls with Links in the **X**, **Y**, **Width**, and **Height** properties. *This bug occurred since v6.0.43*.

5.1.1.3 Viewer

- Fixed an unexpected close of **Elipse E3 Viewer** when trying to open a Screen on the **OnStartRunning** event of another Screen. *This bug occurred since v5.5.7*.

5.2 Version 6.0 Build 213

This section contains updates of version **6.0.213** of **Elipse E3** relative to version **6.0.200**.

5.2.1 New Features

This section contains new implementations in version **6.0.213** of **Elipse E3**.

5.2.1.1 Alarm Server and Alarm Configuration

- Improved the performance of the initialization of Domains with many alarms.
- Improved the performance when restarting applications with many alarms.

5.2.1.2 Installation

- Updated the installer of HKCustomer to version 6.0.55.

5.2.2 Fixed Bugs

This section contains bugs fixed in version **6.0.213** of **Elipse E3**.

5.2.2.1 Alarm Server and Alarm Configuration

- Fixed a GPF when executing a Domain containing an Alarm Filter. *This bug occurred since v6.0.130*.
- Fixed a problem in which User Fields are not updated when an alarm condition happens. *This bug occurred since v6.0.130*.

5.2.2.2 Studio

- Fixed a GPF in **Elipse E3 Studio** when deleting, copying, pasting, or cutting objects containing Connectors. *This bug occurred since v6.0.11*.

5.2.2.3 Viewer

- Fixed a behavior of scroll bars on lists of a TrendAnalysis object, so that they do not hide the last item. *This bug occurred since v6.0.187*.
- Fixed a memory leak that could occur when closing a TrendAnalysis object. *This bug occurred since v6.0.187*.

5.2.2.4 WebViewer

- Fixed an 800700B6 error in the ElipseChartd.dll library when trying to open a TrendAnalysis object in **WebViewer**. *This bug occurred since v6.0.187.*

5.3 Version 6.0 Build 200

This section contains updates of version **6.0.200** of **Elipse E3** relative to version **6.0.199**.

5.3.1 New Features

This section contains new implementations in version **6.0.200** of **Elipse E3**.

5.3.1.1 Installation

- Updated the installer of HKCustomer to version 6.0.44.

5.4 Version 6.0 Build 199

This section contains updates of version **6.0.199** of **Elipse E3** relative to version **5.6.74**.

5.4.1 New Features

This section contains new implementations in version **6.0.199** of **Elipse E3**.

5.4.1.1 ActiveX

- Added protections on **Elipse E3** to circumvent a GPF caused by VLC's ActiveX when switching or closing a Screen.

5.4.1.2 Alarm Server and Alarm Configuration

- Now users can configure the size of Alarm Fields of type **Text** on the database.
- Improved performance of Alarm Filters with sorting by fields enabled.
- Improved CPU usage of **E3Run** process in situations with many alarms.
- Added the **ExcludeSuppressedOnAreaCounter** and **ExcludeSuppressedOnCounters** properties to Alarm Sources and to the Alarm Server, respectively. These properties allow suppressed alarms to be excluded from alarm counters.
- Added the **SuppressedAlarmsConfigured** property to Alarm Sources. This property indicates that the source or sub-condition is configured to allow shelving alarms.

5.4.1.3 Database

- Added an option to use the new provider for SQL Server databases, **MSOLEDBSQL**.

5.4.1.4 Domain, E3 Server, and Hot-Standby

- Created the **ErrorMessage** property in the ?Server.License object, which displays the error message of the current license.
- Implemented a functionality that displays important warnings from **E3 Server** on **Elipse E3 Viewers**, such as license problems.
- Processes in the **SYSTEM** account of **Elipse E3** now create a separate desktop, with a heap larger than Windows default.

5.4.1.5 E3 Admin

- Added the **Address** column on the table of connections of **E3 Admin**'s Statistics window.
- Added the **Restart E3 Server** option on **E3 Admin** contextual menu on Windows Notification Area.

5.4.1.6 E3 Tweak

- Implemented the options **HASP service name** (registry key **HaspServiceName**), **(Re)start HASP service** (registry key **HaspRestartEnabled**), and **Recover HASP service** (registry key **HaspRecoverEnabled**) on Section **E3 Server**.
- Removed the option to disable capturing **Elipse E3** exceptions by Windows.

- Implemented the **Disable process termination** option (registry key **DisableTerminate**) to enable or disable terminating processes when detecting exceptions.
- Implemented the **DesktopHeap** size option (registry key **DesktopHeap**) to configure the size of **E3 Server** *DesktopHeap*.

5.4.1.7 E3Alarm

- Added the **Visible** property to Fields of an E3Alarm's Collection of Fields, to allow showing or hiding a Field at run time.
- Added the **IgnoreDiacritics** property in the Alarm Filter, which turns the expression of the **CustomFilter** property accent-insensitive.
- Added the **MoveAlarmField** method to the Collection of Alarm Fields, which allows changing the order of E3Alarm columns at run time.

5.4.1.8 Find and Replace

- Added support for regular expressions on **Elipse E3 Studio**'s search tool.

5.4.1.9 Installation

- Now **Elipse E3** installer, after installing the protection device driver, also configures the service to restart immediately in case of failure.
- Now the **Full** installer of **Elipse E3** and **Elipse Power** also installs **Microsoft OLE DB Driver for SQL Server**.
- Updated the installer of HKCustomer to version 6.0.31.

5.4.1.10 Interface

- Standardized the term *hardkey* to *product key* in **Elipse E3**'s graphical interface.
- Standardized the texts of the **Properties** tab on **E3 Admin**'s Domain configuration window, as well as the equivalent texts on the users and groups settings in **Elipse E3 Studio** or **Elipse E3 Viewer**.

5.4.1.11 OPC UA Driver and OPC UA Client

- Updated the OpenSSL library, used on the OPC UA Client, of **Elipse E3** to version 1.1.1i.
- Added the **OverrideEndPointURLHost** property, which fixes a problem with servers that provide endpoints with a network address different from the one used to connect to that server.

5.4.1.12 Other Implementations

- Improved the security of REC channel's cryptography.
- **Elipse E3** processes now generate *minidump* files on the **logs** folder whenever an unhandled error or exception is found.
- Updated the detection of the Warsaw security module by Diebold Nixdorf.
- Now **Elipse E3** generates a minidump file with code E3000006 (Stalled) when there is a need to terminate a process in a forced way.
- Added logs for all DCOM's marshalling or unmarshalling failures.
- Now **Elipse E3** processes are always closed in case of major failures, even if they are in DCOM calls.

5.4.1.13 Protection Device

- Updated the installer of HASP drivers (haspdinst) to version 8.23.
- The license window of **E3 Admin** and **Elipse E3** logs now inform the version of the license access service (HASPLMS).
- Implemented a functionality to automatically recover the HASPLMS service to access licenses.
- Created the **TrendAnalysisAvailable** property in the [?Server].License object.
- Implemented a mechanism that temporarily keeps the last valid license in **E3 Server**, even if it is restarted.

5.4.1.14 Screen Objects

- Created the **Points** property in the Polygon object, which allows modifying this object's points.
- Created the **Points** property in the Connector object, which allows modifying this object's Connection Points.

5.4.1.15 Scripts

- Now users can add user events via script.

5.4.1.16 Studio

- Added support for writings on the column of property values on WatchWindow window.

5.4.1.17 Translation

- Removed the usage of his/her and he/she expressions on UI texts.

5.4.1.18 Users

- Added the permission **Write to runtime properties from Studio** to use WatchWindow in writing mode.
- Created a property that allows users to change an expired password.

5.4.1.19 Viewer

- Integrated the TrendAnalysis component in **Elipse E3**.

5.4.2 Fixed Bugs

This section contains bugs fixed in version **6.0.199** of **Elipse E3**.

5.4.2.1 ActiveX

- Now all ActiveX controls inside a group must respect the visibility or the layer of that group. *This bug occurred since v1.18.147.*

5.4.2.2 Alarm Server and Alarm Configuration

- Fixed a problem during the counting of active alarms in Alarm Areas when an alarm is bound again to an Alarm Source. *This bug occurred since v4.0.129.*
- Now users can select again the sort order by fields using the Properties Window of an Alarm Filter. *This bug occurred since v5.5.3.*
- The properties **NumberOfTables**, **NumberOfTimeUnits**, and **TimeUnit** of the Alarm Server are now always hidden. *This bug occurred since v3.5.264.*

5.4.2.3 AppBrowser

- Fixed the list of non-public properties of XControls in an AppBrowser opened by a scripts View in the context of the class of an object. *This bug occurred since v4.0.199.*

5.4.2.4 Database

- Now the connection to an SQL Server server handles several errors as requesting a pause on consuming the operation queue, in addition to other errors of detecting a disconnection with a server.

5.4.2.5 Documentation

- Updated the text of topic **Fixed Bugs - Studio** in version **5.6.74** of **Elipse E3 Release Notes**. *This bug occurred since v5.6.74.*
- Updated the text of topic **Fixed Bugs - Other Corrections** in version **5.5.192** of **Elipse E3 Release Notes**. *This bug occurred since v5.5.192.*
- Updated the text of topic **Fixed Bugs - Scripts Editor** in version **5.5.192** of **Elipse E3 Release Notes**. *This bug occurred since v5.5.192.*
- Updated the text of topic **Fixed Bugs - AppBrowser** in version **5.0.428** of **Elipse E3 Release Notes**. *This bug occurred since v5.0.428.*

5.4.2.6 Domain, E3 Server, and Hot-Standby

- Fixed a behavior that prevented starting a Domain with an OPC client already communicating with an **E3 Server**. *This bug occurred since v3.5.275.*

- Fixed an error in **E3 Server** that prevented the connection of new clients when lacking resources at least one time. *This bug occurred since v1.20.85.*
- Fixed the log of general statistics for processes or computers of **E3 Server** to support more than 1024 processes.
- During the initialization of a Domain, the texts relative to progress bars when loading projects and objects are now updated to **Finished** when the respective loading finishes. *This bug occurred since v4.7.71.*

5.4.2.7 E3 Admin

- Fixed the **Compact libraries** option on the **Properties** tab of Domain's configuration window, which was not saved on a new Domain. *This bug occurred since v5.5.133.*
- Fixed the resizing of fields **Call timeout** and **Security mode** on the **Automatic Pens** tab of the Domain Configuration window. *This bug occurred since v5.6.16.*

5.4.2.8 E3Alarm

- An Alarm now does not have the need for acknowledgment after transitioning to a sub-condition that does not need acknowledgment. *This bug occurred since v4.0.100.*
- The archiving count is now restarted when an Alarm leaves the Summary and it is unarchived. *This bug occurred since v5.5.87.*

5.4.2.9 E3Chart

- Fixed the redrawing of the default vertical scale of an E3Chart when removing the last Automatic Pen. *This bug occurred since v5.0.228.*
- E3Chart's **ResetConfig** method now correctly redefines information on the source of this object. *This bug occurred since v5.0.104.*
- Fixed a possible GPF when using a Pen saved on an Internal Tag after deleting an E3Chart. *This bug occurred since v2.0.15.*
- Fixed an error in which an Automatic Pen stopped being drawn. *This bug occurred since v5.0.270.*

5.4.2.10 Find and Replace

- The **Replace** option is not enabled when the focus on the Results Window is over a group of results. *This bug occurred since v5.0.360.*

5.4.2.11 Interface

- Fixed the update of scroll bars on Drivers View when activating or deactivating communication. *This bug occurred since v5.5.26.*
- The **Apply** button on the User Administration window of **Elipse E3 Viewer** is now enabled when performing changes. An **Apply** button was also added to the User Permissions window of **Elipse E3 Studio**. *This bug occurred since v4.0.167.*
- Standardized and fixed some window titles of modules E3Server.exe, Viewer.exe, and E3Viewer.ocx.

5.4.2.12 OPC UA Driver and OPC UA Client

- Fixed the communication of the OPC UA Driver when there is still no import process of Tags. *This bug occurred since v4.5.166.*
- Fixed a failure on OPC UA Client when the **Username** option is filled but the **Password** option is empty. *This bug occurred since v4.5.166.*

5.4.2.13 Protection Device

- Fixed the counting of time to restart **E3 Server** when changing licenses and increased the limit of this time from 1 (one) minute to 2 (two) hours.

5.4.2.14 Screen Objects

- Fixed the possibility of repositioning the rotation center of Screen objects after undoing a rotation operation. *This bug occurred since v1.0.16.*
- Removed the objects Viewer Folder and Counter, Demo, Internal, and Timer Tags from the contextual menu of the **Design** tab of Screens. *This bug occurred since v4.7.59.*

- Forced the immediate update of **X**, **Y**, **Width**, and **Height** properties of Screen objects when these properties are accessed by script.

5.4.2.15 Scripts

- Fixed the behavior of methods **Application.GetObject** and **Application.Verify** for objects inside Folders. *This bug occurred since v4.8.50.*
- Fixed an **E3Run**'s unexpected close, which could occur when using the **Application.GetObject** method passing a path that ended in a property with a **Nothing** value. *This bug occurred since v5.0.259.*

5.4.2.16 SetPoint

- Fixed the behavior of the SetPoint, so that users cannot edit this object when the **IsSetPoint** and **Enable** properties are changed to False. *This bug occurred since v1.18.54.*

5.4.2.17 Storage

- Optimized the operation of generating and updating Storage tables on the database.

5.4.2.18 Studio

- **Elipse E3 Studio** now always keeps on the title bar information about license, version, and the open Domain.
- Fixed the behavior of **Elipse E3 Studio** when deleting or cutting objects in edition mode.
- Fixed an unexpected closing of **Elipse E3 Studio** when trying to change combo boxes on Historic or Storage Views. *This bug occurred since v5.5.23.*
- Fixed the behavior of the WatchWindow window for objects with children and properties with the same name, such as Historic and Storage. *This bug occurred since v5.0.261.*
- The contextual menu is not incorrectly displayed anymore when right-clicking spin options of values of properties on the List of Properties. *This bug occurred since v2.0.10.*
- The contextual menu is not incorrectly displayed anymore when right-clicking the WatchWindow window. *This bug occurred since v5.6.30.*
- Fixed the path of library resources added from the Gallery window. *This bug occurred since v3.0.21.*
- Fixed the update of the Properties List on **Elipse E3 Studio** when changing properties of Report objects.
- Fixed a GPF that occurred when an object that can be inserted on Screens, but is not drawn, such as Alarm Filters and Line Printers, was rotated or mirrored. *This bug occurred since v4.7.63.*

5.4.2.19 Undo Command

- Fixed the behavior of the **Undo** command on groups inside XControls with connection points. *This bug occurred since v3.5.175.*

5.4.2.20 Users

- Default values of a Domain's security properties were fixed in **E3 Server**. *This bug occurred since v5.5.49.*
- Recovered the information about blocked or disabled account or password expired for correct login tries. Changed the automatic unblocking of accounts so that it only happens with a valid login. *This bug occurred since v5.6.45.*

5.4.2.21 Viewer

- Fixed the update of the **HasFocus** property of controls to allow opening Screens. *This bug occurred since v1.21.41.*
- Fixed the mechanism of detecting **Viewer** and **WebViewer** inactivity to not lock mouse and keyboard messages when enabled. *This bug occurred since v1.20.322.*

Version 5.6

This section contains updates of version **5.6** of **Elipse E3**. To check all updates of this version, please refer to the next topics of all Builds or, to check updates of a Build relative to a previous one, please refer to that specific topic.

6.1 Version 5.6 Build 74

This section contains updates of version **5.6.74** of **Elipse E3** relative to version **5.5.205**.

6.1.1 New Features

This section contains new implementations in version **5.6.74** of **Elipse E3**.

6.1.1.1 Documentation

- Added an item about correcting the behavior of the *zoom* of a Frame's **OpenScreen** method on the topic about fixed bugs of Frames on **Elipse E3 Release Notes** of version **5.5.192**.
- Added a note on **Elipse E3 User's Manual** warning that Domain's security options do not apply to Windows users.

6.1.1.2 Domain, E3 Server, and Hot-Standby

- Now users can configure more than one **EPM** interface to retrieve historical data from Automatic Pens.

6.1.1.3 Drivers and I/O Server

- Implemented support for grouping asynchronous writings and changes to items on a Driver.
- Standardized in **Elipse E3 Studio** the contextual menus of all types of Drivers.

6.1.1.4 E3 Tweak

- Implemented in **E3 Tweak** the cryptography option for the REC protocol.

6.1.1.5 E3Alarm

- Added the **Severity** property to the object returned by E3Alarm's **ColorActiveAlarm**, **ColorAckedAlarm**, **ColorNAckAlarm**, and **ColorActiveEvent** properties.
- The **E3TimeStamp** field is now available on the E3Alarm and on Alarm Filters, and it displays the timestamp of the computer at the moment of an event.

6.1.1.6 E3Browser

- Added the **AllowHeaderSort** property to the E3Browser, which allows enabling or disabling sorting the columns by clicking a column's header.

6.1.1.7 E3Chart

- Improved the performance of Automatic Pens on Reports by paralleling the requests to a server.

6.1.1.8 Installation

- Updated the installer of HKCustomer to version 5.5.81.
- Integrated eeLogs version 4.5.162.

6.1.1.9 Other Implementations

- Added the cryptography (AES-128) option on the communication between an **E3 Server** and clients.

6.1.1.10 Protection Device

- Updated the installer of HASP drivers (haspdinst) to version 8.13.

6.1.1.11 Screen Objects

- Optimized the redrawing time of complex Screens and guides or dotted lines that appear when moving objects in **Elipse E3 Studio**.

6.1.1.12 Scripts

- Created the **RunEvent** and **RunProcedure** methods, which allow executing object scripts arbitrarily.

6.1.1.13 Studio

- The WatchWindow Window was changed from modal to dockable.

6.1.1.14 Users

- Added the possibility of registering groups of Windows users as **Elipse E3** groups.
- The minimum accepted value in the **Days to expire** and **Minimum age in days** options of a user's password was changed to 0 (zero).

6.1.2 Fixed Bugs

This section contains bugs fixed in version **5.6.74** of **Elipse E3**.

6.1.2.1 Alarm Server and Alarm Configuration

- Now User Fields have their values updated before the initial notification of an Alarm Source. *This bug occurred since v4.5.114*.

6.1.2.2 CFR21

- Suppressed the inappropriate generation of logs when clicking **OK** or **Apply** for the first time on Domain's options window. *This bug occurred since v5.5.43*.

6.1.2.3 Data Server

- Fixed the functionality of the INSERT key on the Data Server, on the Data Folder, and on Viewer. *This bug occurred since v5.0.384*.

6.1.2.4 Documentation

- Added all fields that can be used on a custom alarm filter of an Alarm Filter's **CustomFilter** property on **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v5.5.145*.
- Normalized the description of properties **ItemID** and **UaNodeId** of objects OPC UA Tag and OPC UA Block Tag on **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v4.8.161*.

6.1.2.5 Domain, E3 Server, and Hot-Standby

- Fixed the update of the **User** property of **E3 Server**'s ViewerSessionNode object, which was not updated if the session type was **Viewer Only**. *This bug occurred since v5.5.153*.

6.1.2.6 E3 Admin

- Removed the error message repeatedly displayed on the login window of Windows users on **E3 Admin**. *This bug occurred since v5.1.88*.

6.1.2.7 E3 Tweak

- Fixed all texts displaying the abbreviated form of measurement units in milliseconds. *This bug occurred since v5.0.132*.

6.1.2.8 E3Alarm

- Improved the performance of the operations to acknowledge alarms and remove unbound alarms.

6.1.2.9 E3Browser

- Fixed a problem that undid E3Browser's column sorting. *This bug occurred since v5.5.90*.
- Fixed the behavior of the SHIFT key in E3Browser. *This bug occurred since v2.0.87*.

- Fixed the sort order of records of an E3Browser after using the **Deactivate** and **Activate** methods in a Database object. *This bug occurred since v5.5.90.*

6.1.2.10 E3Chart

- Fixed a problem that prevented drawing E3Chart's Pens in Reports when the Query's name contained special characters. *This bug occurred since v3.5.1.*
- Fixed a problem that prevented plotting Automatic Pens linked to Tags without variation. *This bug occurred since v5.0.270.*

6.1.2.11 Interface

- Fixed a problem when updating a Query table and the selected fields were changed. *This bug occurred since v5.5.50.*
- Fixed the format of some messages displaying error messages to users.

6.1.2.12 OPC UA Driver and OPC UA Client

- An OPC UA Driver is now allowed to communicate OPC UA Tags where only the **UaNodeID** property was filled.

6.1.2.13 Other Corrections

- Suppressed the inappropriate generation of logs when trying to load resources in **E3Run** and in **Elipse E3 Studio**. *This bug occurred since v4.7.115.*
- Tags added by script in **Elipse E3 Studio** using the **AddObject** method now respect the activation parameter if communication is activated in **Elipse E3 Studio**.

6.1.2.14 Screen Objects

- Fixed the ungroup command in **Elipse E3 Studio** when there are several groups selected. *This bug occurred since v4.8.165.*

6.1.2.15 Studio

- Formula and Report objects now have their Views opened initially on the **Design** tab again. *This bug occurred since v5.0.204.*
- Fixed, on the Properties List, the visibility of properties **NextExecTime** from Timer Tag object, **IsHTML** from Splitter object, and **User**, **IsReadOnly**, and **Params** from Viewer object.

CHAPTER 7 Version 5.5

This section contains updates of version **5.5** of **Elipse E3**. To check all updates of this version, please refer to the next topics of all Builds or, to check updates of a Build relative to a previous one, please refer to that specific topic.

7.1 Version 5.5 Build 205

This section contains updates of version **5.5.205** of **Elipse E3** relative to version **5.5.192**.

7.1.1 New Features

This section contains new implementations in version **5.5.205** of **Elipse E3**. The available topic is the following:

- **Viewer**

7.1.1.1 Viewer

- Implemented a status indicator for the CAPS LOCK key on Elipse Key Pad.

7.1.2 Fixed Bugs

This section contains bugs fixed in version **5.5.205** of **Elipse E3**.

7.1.2.1 Interface

- Fixed the behavior of the miniwindow on the **Links** tab, which could not open immediately. *This bug occurred since v5.5.50.*
- Fixed a problem on the **Links** tab, which became active if the tab was switched while source edition was still open. *This bug occurred since v5.5.79.*
- Fixed the behavior of clicking buttons of cell grids of **Elipse E3 Studio** when the column cell is larger than the window. *This bug occurred since v4.5.252.*

7.2 Version 5.5 Build 192

This section contains updates of version **5.5.192** of **Elipse E3** relative to version **5.1.195**.

7.2.1 New Features

This section contains new implementations in version **5.5.192** of **Elipse E3**.

7.2.1.1 Alarm Server and Alarm Configuration

- Added a critical severity to alarms.
- Added an option to persist the alarm summary of **E3 Server**.

7.2.1.2 AppBrowser

- Added a keyboard shortcut to load an object in AppBrowser by using the space key.

7.2.1.3 Database

- Oracle connections now suggest the names of connections found on the local computer.
- Improved the performance of AutoHistory tool during the initialization of an application.

7.2.1.4 Demonstration Application

- Replaced the Demonstration Application of **Elipse E3** by an application using the **HighPerformance** library.

7.2.1.5 Documentation

- Updated the headquarters address of **Elipse Software** on the last page of documents in **PDF** format of **Elipse E3**.
- The areas of **New Features** and **Fixed Bugs** sections of **Elipse E3 Release Notes** were changed into topics to make search easy.

- Added a minimum value to E3Browser's **RefreshTime** property on **Elipse E3 Reference and Scripts Manual**.
- Updated the descriptions of alarm fields on the configuration of Alarm Servers on **Elipse E3 User's Manual**.
- Updated the description of the filter option of Storage columns on **Elipse E3 User's Manual**.
- Added a chapter about support channels of **Elipse Software** on **Elipse E3 Minicourse Tutorial**.

7.2.1.6 Domain Verifier

- Now users can export a list of errors found on the Domain Verifier window.

7.2.1.7 Domain, E3 Server, and Hot-Standby

- Now when a client's address does not allow connections, a different error is returned by the server. A **Elipse E3 Viewer** from a newer version formats this error and indicates the reason for a denied connection in case of a **Elipse E3 Viewer** from an older version.
- Improved the log of the **Elipse E3 Viewer**'s license request server.
- Now **E3 Server** by default does not allow a computer to enter sleep mode when there is a Domain executing.
- Optimized the destruction of multiple Links in **E3 Server**, improving the performance of this operation in Remote Domains and **Elipse E3 Viewers**.
- Created in **E3 Server** a Domain Information ([?Server].Domain) object, which allows accessing information about the loaded Domain and its servers.
- Created an option on the configurations of a Domain to specify a friendly name or title.
- Created in **E3 Server** a Client Information ([?Server].Clients) object, which allows accessing information about client connections (**Elipse E3 Viewers**, **Elipse E3 Studios**, and Remote Domains) of an **E3 Server**.
- Created in **E3 Server** a Server Information ([?Server]) object, which can be accessed by Links and scripts.

7.2.1.8 E3 Admin

- The Domain options window got a new style, with a side tree, and the security options were moved to the **Properties** item.

7.2.1.9 E3 Tweak

- Implemented a limit value of 10000 for the **PingTimeout** option and reduced the limit value of the **PingRetries** option from 50 to 10.
- Removed the **Track** section and its modules.
- Removed the **FullREC** section and added the **RECAppartment**, **RECChannel**, **VideoRecorder**, **PowerCADWarmUp**, **PowerHubReceive2**, and **PowerHubSend2** modules to the **Full** section.
- Added the **Prevent Windows from entering sleep/hibernate state** option on the **E3 Server** section.

7.2.1.10 E3Alarm

- The **UserField** method, which returns an alarm's user fields, now also accepts the name of a user field, in addition to its index.
- Added a Collection of Fields to E3Alarm. Each item of this Collection contains the **Name** and **Width** properties, which can be read and changed.
- Added the **UseFormat**, **Format**, **AllowBlink**, **AckOnClick**, and **FieldId** properties to the elements of E3Alarm's Collection of Fields.
- Implemented the alarm archiving in E3Alarm.

7.2.1.11 ElipseX Libraries

- Now users can copy definitions of ElipseX libraries.

7.2.1.12 Frames

- Create in Frame (FrameSet) the **NavigateBack**, **NavigateForward**, and **NavigateHistReset** methods and the **NavigateHistCount**, **NavigateCanGoBack**, and **NavigateCanGoForward** properties, used to navigate and manage the history of open Screens on a Frame.

7.2.1.13 Installation

- Integrated eeLogs version 4.5.150. This version adds command prompt options to **Elipse Event Log Collector** and also a command prompt option to prevent displaying the progress window of **Elipse Event Log Export**.

7.2.1.14 Interface

- The **Source** columns of the **Links** tab and the Edit Links window now have an automatic width.

7.2.1.15 OPC UA Driver and OPC UA Client

- Now the OPC UA client of **Elipse E3** sends an anonymous identity token even when in the **None** security mode.

7.2.1.16 Other Implementations

- Disabled the **Track** section of logs.
- Small improvements in Link managers (**E3Run**, **E3 Server**, and Viewer) and in REC package assembling.

7.2.1.17 Picks

- The **In Frame** text box on **Open Screen** Pick and the text box of **Print Report** Pick where changed to display insert options via AppBrowser instead of displaying a list.

7.2.1.18 Protection Device

- Updated the installer of HASP drivers (haspdinst) to version 8.11.
- Created in **E3 Server** a License Information ([?Server].License) object, which allows accessing information about the current license of a product.

7.2.1.19 Remote Domains

- Created in **E3 Server** a Remote Domain Information ([?Server].Domain.RemoteDomains) object, which allows accessing information about the connections of client Remote Domains.
- Improved statistical logs of connection failures of client Remote Domains.

7.2.1.20 Screen Object

- The **Show in Editor** option does not move the Screen anymore if the selected object is completely visible. If an object does not fit a Screen, zoom is reduced so that this object can be fully visible.
- The keyboard shortcut CTRL + ALT + V in **Elipse E3 Studio** pastes a copy of a Screen object on the same position of the original object.

7.2.1.21 Scripts

- Added a **ScaleImage** method to the Picture object, which allows adjusting the size of this object to the image's original size.

7.2.1.22 Storage

- Implemented a count on Storage Tags in use on **E3 Admin**'s License window.

7.2.1.23 Studio

- Improved performance of operations with many items on lists.
- Added a command to execute **Elipse E3 Viewer** with the currently viewed Screen in **Elipse E3 Studio**.
- Columns of **Elipse E3 Studio** tables now correctly restore their width.
- Windows to edit users and groups now use a list of properties for configuration.
- Now unloaded items in Organizer are displayed in a shade of gray.
- Changed the icons of OPC Drivers and Frames.
- Now users can paste items copied using Organizer on specific object sections.
- Now users can copy and paste items between sessions of the same version of **Elipse E3**.

7.2.1.24 Users

- Properties with Integer data types now accept that their values can be changed via typing.
- If there are errors during a merge of changes performed on the user database, these errors are displayed to users.

7.2.2 Fixed Bugs

This section contains bugs fixed in version **5.5.192** of **Elipse E3**.

7.2.2.1 AppBrowser

- AppBrowser now correctly loads documentation when the selected property quickly changes. *This bug occurred since v5.0.246*.
- AppBrowser, when opened from XControls, now correctly loads documentation of methods and properties. *This bug occurred since v5.0.47*.
- AppBrowser now correctly loads documentation of Server (Application) methods. *This bug occurred since v5.0.33*.

7.2.2.2 Database

- Fixed a behavior in which only the last active DBServer updated the **ConnectionActive** and **TotalFailedWrites** properties. *This bug occurred since v5.0.53*.

7.2.2.3 Documentation

- Fixed the value of Viewer's **ViewerLanguageID** property returned in case of Spanish language on **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v3.5.164*.
- Updated the usage example of Collection of Links' **CreateLink** method on **Elipse E3 Reference and Scripts Manual**.
- Fixed the figure **Link with an expression** on the exercise of chapter **Links** on **Elipse E3 Tutorial Developer**. *This bug occurred since v5.0.63*.
- Updated the description of shortcut keys CTRL + Up or Down arrows on script Views in **Elipse E3 Studio** on **Elipse E3 User's Manual**. *This bug occurred since v5.0.293*.
- Fixed the description of the configuration of I/O Driver's **DisableIOServerPool** property on **Elipse E3 User's Manual** to indicate that this property must be configured to True so that this Driver executes outside the Pool. *This bug occurred since v4.5.106*.
- Updated the description of Formula's **SetValueData** and **SetUnitData** methods on **Elipse E3 Reference and Scripts Manual**.
- Updated the figure **Configuration of a Historic object** of exercise **Application** of chapter **Query** on **Elipse E3 Tutorial Advanced**. *This bug occurred since v5.0.63*.

7.2.2.4 Domain, E3 Server, and Hot-Standby

- The **ping** command an **E3 Server** sends to a client that is connecting does not lock other client connections anymore. Also implemented maximum values for **PingTimeout** and **PingRetries** properties. *This bug occurred since v2.5.186*.
- Fixed a delay to close **E3Run** when stopping a Domain after alarm acknowledgment by E3Alarm. *This bug occurred since v5.1.51*.

7.2.2.5 E3Browser

- Fixed an error in E3Browser that does not display data if the connection to a database fails during initialization. *This bug occurred since v1.22.1*.
- E3Browser now can reconnect to a database that is deactivated and reactivated. *This bug occurred since v1.22.71*.

7.2.2.6 E3Chart

- Fixed a GPF that could occur when keeping a reference to a Legend object after destroying an E3Chart object. *This bug occurred since v0.0.1*.

7.2.2.7 ElipseX Libraries

- Added an option to the Domain to compress or not before sending it to an **Elipse E3 Viewer**. *This bug occurred since v5.0.338*.

7.2.2.8 Expressions

- Fixed the behavior of **TypeName** and **IsObject** methods in Links. *This bug occurred since v1.20.450.*

7.2.2.9 Find and Replace

- The value of the **Find** field is checked before performing a replacement, regardless of the type of property to write. *This bug occurred since v3.5.147.*
- Users are now informed about errors during replacement and there is an option to activate or deactivate messages relative to the Find and Replace window. *This bug occurred since v5.0.360.*

7.2.2.10 Frames

- Fixed the behavior of the *zoom* parameter when omitted in the **OpenScreen** method, which must be 100%. *This bug occurred since v2.5.194.*

7.2.2.11 Interface

- All windows that persist their position are loaded in a normal state when closed while docked on a monitor's edge. Internal Splitters also load their dimensions correctly. *This bug occurred since v2.0.114.*

7.2.2.12 Other Corrections

- Fixed an error that demanded a change in focus before pressing the ENTER key to save changes in the options on the **Properties** tab of the Domain's options window. *This bug occurred since v4.5.77.*

7.2.2.13 Remote Domains

- Fixed the reconnection mechanism of client Remote Domains to prevent slowing down access to objects from the remote server. *This bug occurred since v3.0.201.*

7.2.2.14 Screen Objects

- Converting from *himetric* to pixel was changed to minimize and avoid stacking Screen repositioning errors during zoom in and zoom out operations. *This bug occurred since v4.0.174.*
- Rotation handlers are no longer displayed for a Screen. *This bug occurred since v1.0.16.*
- Fixed the names of some gradient style values of Screen objects, to match the style drawing. *This bug occurred since v1.18.155.*
- The Query, Line Printer, and Alarm Filter objects do not interfere anymore with the size and position of the Group or XControl they belong. *This bug occurred since v1.19.219.*
- Empty Groups do not interfere anymore with the rectangle of the object they belong, such as XControls or other Groups.

7.2.2.15 Scripts

- The menu to select objects must now work correctly after changing events with scripts. *This bug occurred since v5.1.7.*
- Fixed an error on the **Login** method that provoked a failure on the first login attempt of Windows users. *This bug occurred since v5.1.93.*

7.2.2.16 Scripts Editor

- Fixed the update of the list to select events on the Scripts Editor when removing an object selected on an inactive Editor. *This bug occurred since v4.8.280.*

7.2.2.17 Studio

- Users can no longer hide toolbars from Views on the **Customize** menu.
- Font and font size combo boxes correctly display the values of the selected object. *This bug occurred since v5.1.34.*
- Now users can paste a Link over a property that already contain a Link, then replacing the older one. *This bug occurred since v3.1.142.*
- Position and size of the Manage ActiveX Controls window, as well as the position of its internal splitter, are correctly saved. *This bug occurred since v3.5.120.*

- Fixed an error in **Elipse E3 Studio** when a dimensionless object was pasted in a View. *This bug occurred since v5.0.204*.
- Fixed an error that caused a GPF in **Elipse E3 Studio** when changing the DLL of an I/O Driver. *This bug occurred since v5.0.34*.
- Optimized Tag Browser performance when a Driver exposes a very large list of Tags. *This bug occurred since v2.0.7*.

7.2.2.18 Users

- Fixed a problem when loading the position of internal splitters of windows. *This bug occurred since v4.8.98*.
- The position of splitters of **Users** and **Groups** tabs of the User Permissions window now are correctly saved. *This bug occurred since v4.8.98*.
- **Elipse E3 Studio** and **Elipse E3 Viewer** sessions periodically check whether the logged in user is valid. *This bug occurred since v3.2.1*.
- Now a logged-in user in **Elipse E3 Viewer** or in **Elipse E3 Studio** is not affected when the password is changed on another session. *This bug occurred since v1.20.366*.
- The **ChangePassword** method now correctly checks the informed password, by considering the option to ignore case. *This bug occurred since v3.0.320*.
- When trying to save changes on the user database, these changes are applied to the most updated version of the user database, preserving previous changes and logging an error if there is any conflict that cannot be solved automatically. *This bug occurred since v3.0.355*.
- Fixed an error that discarded a password change if a login occurred immediately after. *This bug occurred since v1.20.319*.
- The window to edit users in **Elipse E3 Studio** now is closed when a Domain is unloaded. *This bug occurred since v3.0.420*.

7.2.2.19 Viewer

- Now users can use the **Frame** property in Links of Screen objects.
- Fixed an error that allowed a window's size to be redefined via Pick or script but remained in maximized mode. *This bug occurred since v2.0.1*.
- Viewer's **ProductVersionMajor**, **ProductVersionMinor**, **ProductVersionBuild**, and **ProductString** properties, were removed from the List of Properties in **Elipse E3 Studio**. *This bug occurred since v5.0.103*.
- Opened modal Screens from inside an **OnShow** script now work correctly.

CHAPTER 8 Version 5.1

This section contains updates of version **5.1** of **Elipse E3**. To check all updates of this version, please refer to the next topics of all Builds or, to check updates of a Build relative to a previous one, please refer to that specific topic.

8.1 Version 5.1 Build 195

This section contains updates of version **5.1.195** of **Elipse E3** relative to version **5.1.193**.

8.1.1 Fixed Bugs

This section contains bugs fixed in version **5.1.195** of **Elipse E3**.

8.1.1.1 Other Corrections

- Fixed a GPF (*General Protection Failure*) that could occur on **Elipse E3 Viewer** if a Text, SetPoint, or Text Box object in edition mode was closed from inside its own script on **KeyDown** or **Validate** (when triggered by the ENTER key) events. *This bug occurred since v5.1.122.*

8.2 Version 5.1 Build 193

This section contains updates of version **5.1.193** of **Elipse E3** relative to version **5.1.192**.

8.2.1 New Features

This section contains new implementations in version **5.1.193** of **Elipse E3**.

8.2.1.1 Protection Device

- Updated the installer of HASP drivers (haspdinst) to version 7.103.

8.3 Version 5.1 Build 192

This section contains updates of version **5.1.192** of **Elipse E3** relative to version **5.1.186**.

8.3.1 Fixed Bugs

This section contains bugs fixed in version **5.1.192** of **Elipse E3**.

8.3.1.1 Domain, E3 Server, and Hot-Standby

- Fixed a failure in **E3 Server**, which could occur when clients were closing but still receiving alarm updates. *This bug occurred since v4.5.112.*
- Fixed a possible GPF (*General Protection Failure*) in **E3 Server** when closing a client, **Elipse E3 Viewer** or Remote Domain, with Links. *This bug occurred since v5.0.248.*

8.4 Version 5.1 Build 186

This section contains updates of version **5.1.186** of **Elipse E3** relative to version **5.1.175**.

8.4.1 New Features

This section contains new implementations in version **5.1.186** of **Elipse E3**.

8.4.1.1 Documentation

- Updated the **Elipse Software**'s headquarters address throughout **Elipse E3** documentation.

8.4.2 Fixed Bugs

This section contains bugs fixed in version **5.1.186** of **Elipse E3**.

8.4.2.1 Users

- Fixed a lack of registration of password change events. *This bug occurred since v5.1.133*.

8.5 Version 5.1 Build 175

This section contains updates of version **5.1.175** of **Elipse E3** relative to version **5.0.439**.

8.5.1 New Features

This section contains new implementations in version **5.1.175** of **Elipse E3**.

8.5.1.1 CFR21

- Implemented the **Keep history of last *n* passwords used** and **Password minimum duration is *n* days** options as part of CFR21 security policies.

8.5.1.2 Documentation

- Added support for **Windows Server 2019** on **Elipse E3** documentation.
- Added changes to **Elipse E3 Tutorial Developer** on its on-site and online versions.
- Added a chapter about support channels on **Elipse E3 Tutorial Advanced** and on **Elipse E3 Tutorial Developer** replacing the chapter about **Elipse Knowledgebase**.
- Added support for **Windows 10 Enterprise LTSB/LTSC** on **Elipse E3** documentation.

8.5.1.3 Domain Verifier

- Now Links in non-existing properties are added to verification errors.
- The list of errors on Domain Verifier now displays a **Solution** column, with suggestions to solve errors.
- Created a **Verify** method in the Application object of **Elipse E3 Studio**, which allows exporting a list of errors found to a file in **CSV** format.

8.5.1.4 E3 Tweak

- Added options for script profiling in **E3 Tweak**.
- Added new modules on the **Full** logs section of **E3 Tweak**.

8.5.1.5 E3Browser

- Now users can select an alignment for columns and column headers in an E3Browser.

8.5.1.6 E3Chart

- Implemented a shortcut key ALT + . (period) to edit the **Style** column on the **Pens** tab of E3Chart's Properties Window.
- Now, when a requested Tag is not found and the connection to **EPM** is configured, the manager searches and adds Tags found on-demand on **EPM** tree.

8.5.1.7 E3DataAccess Library

- Created a new installer for **E3DataAccess Library**, by keeping Windows Registry for the control but with support to SxS (*Side-By-Side*) local and private installation of dependencies.

8.5.1.8 ElipseX Libraries

- Created a **Show Class Definition** option on the contextual menu of ElipseX (XControls, XObjects, and XFolders) instances.

8.5.1.9 Installation

- DLLs ucrtbase.dll and api-ms-win*.dll are not copied anymore to folder **bin** of **Elipse E3** on **Windows 10** or later.

8.5.1.10 Interface

- Screen toolbars now are inside Screen Views.
- Implemented scroll bars on the **Scripts** tab of object Views.

8.5.1.11 Links

- Created a log session called **Links**, which lists all propagation via Links of values of object properties, also showing which properties were changed and which scripts were executed as a consequence of changes to a property.

8.5.1.12 OPC UA Driver and OPC UA Client

- OPC UA Client's certificate of **Elipse E3** is now generated with a **sha256RSA** signature.
- Updated the OpenSSL library, used by the OPC UA Client of **Elipse E3**, to version 1.0.2t (1.0.2.20).
- Added the **MaxNodesPerClientCall** property to OPC UA Driver to manage the maximum size of arrays of nodes passed by parameter in server requests.
- Implemented splitting operations to register and remove Tags in the server, according to the configuration of OPC UA Driver's **MaxNodesPerClientCall** property.

8.5.1.13 Other Implementations

- Created the **IsObjectActive** property, which indicates whether a native **Elipse E3** object is active or not.
- Added to log an information of when **Elipse E3**, client or server, is using a non-standard TCP/IP port, that is, other than 6515 on connections.
- Logs of **RECRaw** session were redesigned.
- **Elipse E3 Studio** grids now display a tool tip for cell values with hidden or partially hidden text.
- Added in the **Full** log the registry keys **FullLogComCalls**, to enable recording all DCOM calls received, and **FullLogRecCalls**, to enable recording all REC calls sent and received.

8.5.1.14 Protection Device

- **E3 Server** now accepts **TimeHasp**-type protection devices with their internal clock battery discharged, as long as the device does not have a programmed expiration date.
- Updated the installer of HASP drivers (haspdinst) to version 7.100.

8.5.1.15 Remote Domains

- Creating remote Links in **E3 Server** is now faster, specially in cases where a computer is consuming a lot of memory. Situations that used to take minutes to connect, even closing the connection of the Remote Domain, now take a few seconds.

8.5.1.16 Screen Objects

- Implemented shortcut keys to move a Screen inside window's area.
- Now users can add objects to a selection with a combo box.
- Now scrolling a Screen is always allowed in **Elipse E3 Studio**, regardless of Windows configuration.
- Implemented shortcut keys for the **Zoom** contextual menu.
- Implemented a command and a shortcut key to fit Screens in **Elipse E3 Studio** and in **Elipse E3 Viewer**.
- Implemented new options to select Screen alignment in scripts, Picks, and in the **SplitLink** property.
- Implemented an area zoom mode on Screens.
- Added the **PolygonFill** property to Polygons and Curved Polygons to configure the fill mode of these objects.

8.5.1.17 Scripts

- Optimized the opening of the window in the **UserAdministration** method by **Elipse E3 Viewer** and the Domain's user window by **Elipse E3 Studio**, which used to be slow with many users and groups.
- Added an optional **Boolean** parameter *WindowsAutolog* to the **Login** method. A True value autocompletes the user and password fields with information from the current logged-in user, if the Windows authentication option is selected. Otherwise, the user name and password must be entered manually.
- Implemented the **MsgBoxEx** method, which allows opening a message box on a specific position on Screen.

8.5.1.18 SetPoint

- Implemented the **MaxCharacters** and **RemainingCharacters** properties in SetPoints.

8.5.1.19 Studio

- Font combo boxes of **Elipse E3 Studio** now have a more suitable size.
- Toolbars of Views now split when resizing **Elipse E3 Studio** window only on splitters of each group.
- The **Edit Grid** option is now also available on **Elipse E3 Studio** toolbar as a sub-menu of the **Grid** option.
- Standardized and updated icons and cursors of tools with the same functionality among Screen Views of **Elipse E3 Studio** and E3Chart.
- The buttons of View toolbars are now always visible and the toolbars fit to View size.
- Combo boxes of names of objects on script Views now have a more suitable size.
- The Object Counting window does not open by default anymore on new installations of **Elipse E3 Studio**.
- Now users can navigate among items of a Screen using the keyboard.
- The **Show in Editor** option of the contextual menu of objects places the selected object inside the visible area.
- Implemented a system of library packages in **Elipse E3**.
- Added a confirmation message when users try to stop a Domain in **Elipse E3 Studio**, which can be disabled on the **Tools - Options** menu.

8.5.1.20 Users

- Added an option to request a minimum number of special characters in user's passwords.
- Implemented a confirmation in case users want to change their password inside the range of days until expiration.
- Included optional parameters *PosX* and *PosY* in the **Login** and **UserAdministration** methods, which indicate the position, in pixels, relative to the left and top, respectively, where the dialog box is opened.
- During a password change, if multiple errors related to security policies occur, all those errors are listed on a single message.
- Implemented a modification when registering date and time changes of a password to consider whole days starting at midnight of the day of change.
- Added the **LoginWindowsUser** method, which executes a silent login using a Windows user.
- Implemented the **IsUserMemberOfGroup** method, which checks whether a certain user belongs to a group or not.

8.5.1.21 Viewer

- Created the **AllowContextMenu** property, which enables or disables the contextual menu, and the **AllowZoomChange** property, which enables or disables changes in zoom. The **AllowContextMenu** property replaces the **EnableZoomMenu** property, which was deprecated.
- Added the optional parameters *XPos* and *YPos* to the **PasswordConfirm** and **ChangePassword** methods, which are the position, in pixels, relative to the upper left corner where the respective windows are opened.
- Created the optional parameters *OpStatus* and *WarnDaysToExpire* in the **LoginUser** method. The *OpStatus* parameter returns an error code according to the result of the operation and the *WarnDaysToExpire* parameter informs the number of days for a password to expire. A **ChangeUserPassword** method was also created for silent changes of passwords.

8.5.2 Fixed Bugs

This section contains bugs fixed in version **5.1.175** of **Elipse E3**.

8.5.2.1 ActiveX

- Fixed the behavior of MS Forms objects when activated with their **Enabled** property set to False.

8.5.2.2 Documentation

- Updated exercises to configure IIS (*Internet Information Services*) on **Elipse E3** documentation to not create one more virtual directory during configuration.
- Fixed the description text of the *FileClass* parameter of E3StudioApplication's **ListFiles** method on **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v5.0.301.*

8.5.2.3 Domain, E3 Server, and Hot-Standby

- Added and fixed in **Elipse E3 Studio**, **E3 Server**, and **E3Run** the detection of duplicated files in a Domain.

8.5.2.4 Domain Verifier

- Fixed an error where the options **No (All)** and **Yes (All)** did not apply only to the current verification. *This bug occurred since v5.0.117.*
- Domain Verification now indicates when an XControl definition was not found. *This bug occurred since v2.5.39.*
- Improved detection and error messages for future objects of **Elipse E3**, as well as for **Elipse Power** objects when trying to open them in **Elipse E3**. *This bug occurred since v1.18.147.*
- Excluded items during a verification should not appear on the list of results anymore. *This bug occurred since v1.20.358.*

8.5.2.5 E3 Admin

- Fixed the shortcut keys conflicting with the **Apply** option on Domain's configuration tabs of **E3 Admin**.
- Remapped the shortcut keys of controls on the **Options** and **Automatic Pens** tabs of Domain configuration on **E3 Admin**.

8.5.2.6 E3 Tweak

- Added a vertical scroll bar in the **Description** field of **E3 Tweak**'s window. *This bug occurred since v3.2.178.*

8.5.2.7 E3Chart

- Fixed a problem preventing plotting Automatic Pens in a Report. *This bug occurred since v5.0.259.*
- Fixed a problem generating multiple error messages after inserting invalid values in E3Chart and E3Browser properties. *This bug occurred since v4.0.197.*

8.5.2.8 ElipseX Libraries

- Now, before registering a library, there is a dialog box asking whether users want to save the changed classes. *This bug occurred since v2.0.141.*

8.5.2.9 Expressions

- Implemented support for using indexes for arrays in Link expressions. *This bug occurred since v1.18.147.*

8.5.2.10 Find and Replace

- The **Replace** option now works correctly in **Variant**-type fields of Picks. *This bug occurred since v5.0.360.*
- The **Look in** field of the Find and Replace window now shows the complete path of an object. *This bug occurred since v5.0.300.*
- The **Replace** option now works correctly in **Variant**-type fields of Digital Links. *This bug occurred since v5.0.360.*
- Now all replacement operations display a progress window. *This bug occurred since v5.0.300.*

8.5.2.11 Gallery

- Fixed the behavior of Picture's **VerticalPercentFill** and **HorizontalPercentFill** properties when using an original metafile, that is, not converted to symbol. *This bug occurred since v5.0.378.*
- Fixed an incorrect fill of drawing primitives without fill inside a Picture with shadow or with a partial **PercentFill** property. *This bug occurred since v4.0.185.*

8.5.2.12 Interface

- Tip texts of the options on the **Scripts** tab are now displayed correctly. *This bug occurred since v2.0.84.*

8.5.2.13 Links

- Fixed the possibility of a duplicated reconnection of Links from Remote Domains. *This bug occurred since v3.0.201.*

8.5.2.14 OPC Client

- Fixed the update of OPC Driver's **ServerStatus** property to not wait for the timer that checks the connection. *This bug occurred since v4.6.73.*

8.5.2.15 OPC UA Driver and OPC UA Client

- Fixed the update of OPC UA Driver's **ServerState** property to not wait for the timer that checks the connection. *This bug occurred since v4.8.122.*

8.5.2.16 Other Corrections

- Added separators among parameters in the **Full** log. *This bug occurred since v5.0.390.*
- The window to create arrays now closes correctly when clicking **OK**. *This bug occurred since v4.8.62.*

8.5.2.17 Reports

- Fixed a problem preventing real-time data from being displayed in fields on Report's **Page Footer** Section.

8.5.2.18 Screen Objects

- Fixed the zoom when performing a Screen fit in one dimension, specific to the alignment mode **paTopLeft**. *This bug occurred since v1.18.155.*
- Implemented a fix to Screen replacement after adding an object. *This bug occurred since v5.0.424.*
- Implemented a correction involving shortcut keys CTRL + Mouse wheel and SHIFT + Mouse wheel so that they are restricted to this combination, and the mouse wheel only to vertical displacement. *This bug occurred since v5.0.395.*
- Fixed repositioning windowed ActiveX controls on a Screen aligned to center when moved or resized. *This bug occurred since v5.0.351.*
- Fixed repositioning of Screen's visible area when changing zoom levels after finishing the Application Wizard. *This bug occurred since v5.0.414.*
- Fixed the drawing of the selection rectangle, if started from a transition of the **Move** mode. *This bug occurred since v4.8.87.*
- The zoom mode is no longer lost when an object is added or resized on a Screen. *This bug occurred since v5.0.415.*
- The status bar now displays information correctly when a Screen is created and updated when zoom changes, even if focus is not on any object of the **Design** tab. *This bug occurred since v2.0.45.*
- Improved conversion of images of type **EMF** (*Enhanced Metafile*) and **WMF** (*Windows Metafile*) to symbol. *This bug occurred since v1.18.147.*
- Now Screen objects pasted on a group appear correctly in their original position. *This bug occurred since v5.0.337.*

8.5.2.19 Scripts Editor

- Fixed resizing the **Scripts** tab on User Events. *This bug occurred since v5.0.271.*
- Fixed side effects when renaming canceled User Events. *This bug occurred since v5.0.289.*

8.5.2.20 Studio

- Fixed the update of inactive Screens in **Elipse E3 Studio** when the grid is activated or deactivated.
- Combo boxes on the **Format** toolbar are now only enabled when users select an object with a **Font** property. *This bug occurred since v2.0.20.*
- Fixed the behavior of expanding all items in Views that display XObject instances. *This bug occurred since v1.18.30.*
- Menu buttons in **Elipse E3 Studio** toolbars are now correctly disabled. *This bug occurred since v1.0.16.*
- Keyboard focus now remains on the Properties List when **Elipse E3 Studio** is minimized and maximized. *This bug occurred since v5.0.231.*
- **Elipse E3 Studio** now correctly closes when there are floating and sliding windows. *This bug occurred since v5.0.244.*
- Fixed duplicated shortcut keys for the **Apply** option on the data configuration tab of Pens of an E3Chart.
- The contextual menu of Screens now displays again the **Verify** option. *This bug occurred since v5.0.374.*
- Now docked windows correctly pass along focus when changed to sliding mode. *This bug occurred since v2.0.22.*
- Remapped the shortcut keys of controls of **General** and **Visual Reference** tabs of E3Chart Axes.
- The combo box of Scripts View can now be used normally on a floating window. *This bug occurred since v5.0.229.*

- Now users can use the menu in **Elipse E3 Studio** window with a floating Organizer. *This bug occurred since v5.0.178.*
- Fixed the behavior of **No for All** and **Yes for All** options when closing **Elipse E3 Studio**. *This bug occurred since v4.7.38.*
- The **Explode Symbol** (convert into a group) option was optimized and it is faster in complex objects.
- Fixed a GPF (*General Protection Failure*) that occurred when trying to convert to symbol a metafile containing **EMR_POLYBEZIERTO16**-type records.
- Sub-items of contextual menus now do not display nonsense messages anymore in **Elipse E3 Studio** status bar. *This bug occurred since v4.8.243.*
- Fixed a GPF (*General Protection Failure*) when closing the window to import OPC Tags. *This bug occurred since v1.0.0.*
- Removed an unnecessary message about saving project and library files and fixed the **Save** option in **Elipse E3 Studio** toolbar to fully save folders, projects, and libraries. *This bug occurred since v5.0.363.*
- Fixed a GPF (*General Protection Failure*) in **Elipse E3 Studio** when opening a Domain on the list of Recent Domains. *This bug occurred since v3.0.223.*
- Restored the drawing of Properties List's borders of **Elipse E3 Studio** on **Windows 10**.
- Now **Elipse E3 Studio** is visible on Windows ALT + TAB window even when there is a sub-window of the Properties Window open.

8.5.2.21 Translation

- Standardized shortcuts to **Elipse Software** website on the **Help** menu of **Elipse E3 Studio**. *This bug occurred since v5.0.137.*
- Updated translation of configuration windows of User Events on **Elipse E3 Studio**. *This bug occurred since v5.0.387.*
- Removed a repeated word on the search results window of **Elipse E3 Studio**. *This bug occurred since v5.0.408.*

8.5.2.22 Users

- Blocked the creation of users or groups if there is any field with invalid data. *This bug occurred since v1.20.304.*
- Fixed the verification of days to display messages warning users about password expiration. *This bug occurred since v1.20.355.*
- Text boxes on the **Security Policies** area on the windows to edit users and groups and on the **Password General Policies** area on the Domain options now only accept numbers and cannot be left blank. *This bug occurred since v1.20.304.*

Version 5.0

This section contains updates of version **5.0** of **Elipse E3**. To check all updates of this version, please refer to the next topics of all Builds or, to check updates of a Build relative to a previous one, please refer to that specific topic.

9.1 Version 5.0 Build 439

This section contains updates of version **5.0.439** of **Elipse E3** relative to version **5.0.437**.

9.1.1 Fixed Bugs

This section contains bugs fixed in version **5.0.439** of **Elipse E3**.

9.1.1.1 Links

- Fixed the possibility of a double reconnection of Links from Remote Domains. *This bug occurred since v3.0.201.*

9.2 Version 5.0 Build 437

This section contains updates of version **5.0.437** of **Elipse E3** relative to version **5.0.434**.

9.2.1 Fixed Bugs

This section contains bugs fixed in version **5.0.437** of **Elipse E3**.

9.2.1.1 Scripts

- Fixed the access to **Events** properties of E3Alarm and Alarm Filter objects. The **Events** property, common to all objects, was renamed to **ObjectEvents**. *This bug occurred since v5.0.376.*

9.3 Version 5.0 Build 434

This section contains updates of version **5.0.434** of **Elipse E3** relative to version **5.0.432**.

9.3.1 Fixed Bugs

This section contains bugs fixed in version **5.0.434** of **Elipse E3**.

9.3.1.1 Links

- Fixed a behavior of Links, which could discard a value that changed exactly during the reconnection of that Link. *This bug occurred since v3.0.201.*

9.4 Version 5.0 Build 432

This section contains updates of version **5.0.432** of **Elipse E3** relative to version **5.0.428**.

9.4.1 Fixed Bugs

This section contains bugs fixed in version **5.0.432** of **Elipse E3**.

9.4.1.1 Documentation

- Fixed new implementations that were wrongly added or not added at all on **Elipse E3 Release Notes**. *This bug occurred since v5.0.425.*

9.4.1.2 Import and Export

- Fixed the import process of instances of XObjects via CSV (*Comma-Separated Values*) files. *This bug occurred since v5.0.158.*

9.4.1.3 Interface

- Fixed the behavior of the ENTER key and the combination of keys SHIFT + ENTER of closing the Properties Window when editing a source of a Link on the **Links** tab. *This bug occurred since v5.0.291.*

9.5 Version 5.0 Build 428

This section contains updates of version **5.0.428** of **Elipse E3** relative to version **4.8.358**.

9.5.1 New Features

This section contains new implementations in version **5.0.428** do **Elipse E3**.

9.5.1.1 Alarm Server and Alarm Configuration

- The **Analog** tab on the Properties Window of Analog Alarms now uses a grid to configure its Subconditions.

9.5.1.2 AppBrowser

- Changed the generic icons of collections and collection items in AppBrowser, which now also shows collections inside collections.
- AppBrowser now shows parameters in properties as well. Properties with known indexes are shown directly in AppBrowser's tree.

9.5.1.3 Database

- Changed the order of error messages from Access, SQL Server, and Oracle databases. The code and description of errors now come before the executed SQL **String**. Standardized all messages with the expression "sql string" and its variations to "SQL String".
- Implemented a verification of objects for the configuration of indexes and primary keys of a Historic.

9.5.1.4 Demonstration Application

- Removed the PenGroup library from **Elipse E3**'s Demonstration application.

9.5.1.5 Documentation

- Added information on **Elipse E3** documentation about using reserved characters in names of objects.
- Removed a note alerting that users had to change a Digital Link's data type so that the exercise about libraries on **Elipse E3 Tutorial Advanced** worked.
- Fixed several texts of **Elipse E3** documentation to replace the expression licensing for product key where it applies. In addition, were added notes on **Elipse E3 User's Manual** explaining how licenses work for Tags and Block Tags.
- Updated **Elipse E3 User's Manual** with information about Stored Procedures used by a Storage on a database.
- Updated the description of the **EnableTextColor** property of an Axis on E3Chart's Collection of Axes on **Elipse E3 Reference and Scripts Manual** to indicate that, when disabled, it uses the color defined in E3Chart's **ForeColor** property.
- Updated the topic about including E3Playback in the Demonstration application on **Elipse E3 User's Manual**.
- Added a new topic on chapter **Elipse E3 Studio** of **Elipse E3 User's Manual** called **Shortcut Keys** with shortcut keys used by several commands in **Elipse E3 Studio**.
- Updated the topic with usage examples of SQL Server on **Elipse E3 User's Manual** to remove the reference to version 2000, already discontinued.
- Added the corresponding properties on **Elipse E3 Reference and Scripts Manual** of the **Calculate statistical data**, **Show average line**, and **Show minimum and maximum** options of the **Statistics** tab of an E3Chart Pen described on **Elipse E3 User's Manual**.
- Added the property corresponding to the **Invert scale** property on the **Axis** tab of E3Chart's configuration on **Elipse E3 User's Manual**.
- Updated **Elipse E3** documentation to remove **Windows XP**, **Windows Vista**, and **Windows Server 2003** from the list of operating systems supported by **Elipse E3**.
- Updated all figures on **Elipse E3** documentation to show the new controls of Common Controls 6.0 library and **Windows 10** theme.

9.5.1.6 Domain, E3 Server, and Hot-Standby

- Optimized the size of libraries sent to a **Elipse E3**.

9.5.1.7 Domain Verifier

- Implemented a new interface and a new behavior to perform a Domain verification.
- Domain Verifier now also warns users when there is more than one Alarm Server or more than one Viewer.
- Domain Verifier now warns users if items not supported inside XObjects, such as Alarm Servers, are inside these objects.
- Users can now use Domain Verifier with multiple objects in Views that allow multiple selection.
- Domain verification now warns users if items not supported in XObjects are inside these objects.

9.5.1.8 Drivers and I/O Server

- Changed the logic of timers of an I/O Server to allow scans shorter than 100 ms.
- Created the **WriteNullAsEmpty** property for Drivers, which makes it easy to implement Gateways.

9.5.1.9 E3 Admin

- Added a **Pending Data** column to **E3 Admin**'s Statistics window, together with **Pending Packets** column.

9.5.1.10 E3 Tweak

- Added the **EnableScriptProfiling**, **ScriptProfilingDumpIntervalSec**, **MinScriptDurationMs**, and **MinFragmentDurationMs** options to activate the script profiler tool. It was also added a row on the description field of the options for a better visualization of descriptions that use more than one row.
- Added configurations relative to **EdbSync**, **EdbSync** and **Full.EdbSync** log keys.
- Added the configuration of the profiling tool corresponding to the **DisableMinizeHeap** option.

9.5.1.11 E3Alarm

- An Alarm Filter's Properties Window is now a modal dialog box.
- Implemented a new option to blink alarm colors, which blinks only the text and toggling between the already defined text color and a second color specified only for this blinking option.

9.5.1.12 E3Browser

- Created a new **Colors** tab for an E3Browser's Properties Window.
- Created the **HeaderWordWrap** property, which allows displaying the text of column headers on multiple rows.

9.5.1.13 E3Chart

- Implemented Automatic Pens on E3Chart.
- Implemented an automatic manager of historical data.
- Added a configuration window on **E3 Admin** to configure a connection to **EPM**, used by Automatic Pens.
- Implemented an Automatic Axis on E3Chart.
- Changed the interface of E3Chart's **Legend** tab for the configuration of column properties.

9.5.1.14 ElipseX Libraries

- Added a **Register Libraries** option near the **Save All** option on the **Default** toolbar, added a shortcut CTRL + SHIFT + L to register all libraries, and added an icon near the **Register Loaded Libraries** option on the contextual menu, so that users get familiar with that option on the toolbar.
- Added the **ValueMode** property in the definitions of an ElipseX, which informs whether instances of the defined classes contain analog, discrete, or undefined values.
- Now users can insert I/O Tags directly as child objects of an XObject, without the need of a Data Folder.

9.5.1.15 Find and Replace

- Implemented finding by categories.
- Implemented a new interface for finding and replacing in **Elipse E3 Studio**.
- Now users can use two result windows for finding and replacing. Results are now separated in groups and users can also add the results of a new find or replace operation to existing results.
- The find and replace dialog box now restores the options used by users between sessions.

9.5.1.16 Historic

- Created the **Fields** property, which returns the collection of Fields of a Historic.
- Changed the Fields of a Historic to become objects that appear in Organizer.
- Changed the definition of indexes and primary keys of a Historic, now performed with native **Elipse E3** objects.

9.5.1.17 Installation

- Integrated eeLogs version 4.5.126.
- Updated the installer of HKCustomer to version 5.5.48.

9.5.1.18 Interface

- Standardized borders of controls of type **ListControl** and **TreeControl** on dialog boxes.
- Improved support for using a keyboard on **Elipse E3 Studio** grids.
- Added shortcut keys F4 and SHIFT + F4 to open lists on the Properties List and ALT + . (period) for ⋯ options of fields in general.
- Implemented standard navigation by shortcut keys ENTER or SHIFT + ENTER and TAB or SHIFT + TAB on **Elipse E3** grids.
- The **Rename** option now works more consistently when selecting multiple objects.
- Contextual menus in **Elipse E3 Studio** were revised to present a more consistent behavior.
- Changed the term **Viewer Full** by **Viewer Control** on the **Group of Viewers** tab on the Domain's options window of **E3 Admin**.
- Changed the use of the expressions "license" or "license of use" on **Elipse E3** documentation for the expressions "key" or "product key", respectively.

9.5.1.19 OPC UA Driver and OPC UA Client

- Updated the OpenSSL library, used by the OPC UA Client, to version 1.0.2p (1.0.2.16).
- Increased compatibility of OPC UA Client to OPC UA standard by removing the filter for data change in the subscription.

9.5.1.20 Other Implementations

- **Elipse E3**, **Elipse E3 Viewer**, and **WebViewer** now require **Windows 7 SP1**, **Windows Server 2008 R2 SP1** or later to install.
- Trying to load corrupted files happens only once, until the corresponding project file be updated.
- Optimized the time to open and close very complex objects.
- Added the **DisableMinimizeHeap** option to Windows Registry to control **Elipse E3** memory release to the operating system.
- Added and standardized the Full logs of waiting statuses of **Elipse E3**.
- Now **Elipse E3** logs indicate whether the **Diebold Warsaw** module is installed on the computer where **Elipse E3** is executing.

9.5.1.21 Protection Device

- Updated the installer of HASP drivers (haspdinst) to version 7.81.

9.5.1.22 Screen Objects

- Copying a Screen object by dragging it with the CTRL key pressed now creates a new object over the existing objects.
- Implemented a shortcut key SHIFT + Mouse wheel to scroll a Screen horizontally, as long as the scroll bar is visible.
- Implemented a **FitObject** method for Screens and Screen objects. This method fits a Screen or a Screen object to the center of the window or Screen using a percentage relative to the Screen for filling.
- Implemented a new option for Screen alignment or anchoring as centered in the visible area for editing (in **Elipse E3 Studio**) or viewing (in **Elipse E3 Viewer**). This option allows new zoom features.

9.5.1.23 Scripts

- Implemented the **ProductString**, **ProductVersionMajor**, **ProductVersionMinor**, and **ProductVersionBuild** properties in the Application object and created the **E3ProductString**, **E3ProductVersionMajor**, **E3ProductVersionMinor**, and **E3ProductVersionBuild** methods in the **E3Globals** module, used in Links and scripts.

- Implemented support for objects of the *Viewer* context in Studio's **ListFiles** method.

- The **Application.Trace** method is now also available in **Elipse E3 Studio** and in **Elipse E3 Viewer** and that message is registered in **Elipse E3** logs. In **E3Run** this method keeps recording messages in Domain's log files, in the format **<DomainName>.txt**, but also registers that message in **Elipse E3** logs.

- Implemented a tool to analyze script performance (profiler), which can be enabled in Windows Registry.

- Created the **Events** property in **Elipse E3** objects, which is a collection of events that allow adding scripts by script in any object.

- **Elipse E3** now can, by enabling it in Windows Registry, declare its script structure for an easy debugging in **E3Run**, **Elipse E3 Viewer**, and **Elipse E3 Studio**.

9.5.1.24 Scripts Editor

- Added shortcut keys in Scripts Editor for AppBrowser, for the Find and Replace tool, and for the command to compile scripts.

- Added shortcut keys for all options on the Scripts Editor's toolbar.

- Implemented a new interface to edit User Events.

9.5.1.25 Storage

- Created one more index by default on Storage tables, sorting only by the **E3Timestamp** field.

- Created the **DeleteField** method on the Collection of Storage Fields and allowed a writing in the **Name** property of Fields.

- Changed Storage Fields to become objects that appear in Organizer.

9.5.1.26 Studio

- Added shortcut keys in **Elipse E3 Studio** for the **Saves and Runs the Domain** (F9), **Run or Stop Domain** (SHIFT + F9), and **Run or Stop Elipse E3 Viewer** (CTRL + F9) options.

- Added options to access **Elipse Knowledgebase**, **Elipse Software** channel on YouTube, and **Elipse Software** Driver's download page on **Elipse E3 Studio**'s **Help** menu.

- When creating or saving an object, a Folder, or a Resource, **Elipse E3** version used to save them is now registered. When executing an application, saved versions of every object are registered on logs.

- **Elipse E3 Studio** now displays a warning to users in case they try to add a library copied from an existing one. In addition, the Domain Verifier is now opened when finding errors in a Domain when executing an application.

- **Elipse E3** now uses the Common Controls 6.0 library.

- Standardized the size of text and date and time edition boxes to fit a Spin Button.

- Removed the single tab on WatchWindow window.

- Implemented a new shortcut for the **Show in Editor** command, a double-click or press the ENTER key on an item in Organizer or Explorer.

- Created shortcut keys for **Elipse E3 Studio** windows (Organizer, Gallery, Properties List, etc.).

- Changed the terminology for the Domain or Object Verification.

- The configuration window of Digital, Analog, Table, and Multiple Links now allows receiving keyboard focus using shortcut keys CTRL + ENTER and ALT + Down arrow when focus is on Link's row and column.

- Created the **DeleteFile** method to delete objects from project files by script in Studio.

- Implemented new styles or themes for **Elipse E3 Studio** and changed the default theme.

9.5.1.27 Translation

- Changed the expression from "deleted" to "removed" in the names of removal events of users and groups on the configuration of event registration of a Domain.

9.5.1.28 Viewer

- Added logs for the Login window and changed the logs when opening Screens to register failures.
- Added the *CreateNew* parameter to Viewer's **GetFrame** method, which allows returning only existing Splitters.

9.5.2 Fixed Bugs

This section contains bugs fixed in version **5.0.428** of **Elipse E3**.

9.5.2.1 Alarm Server and Alarm Configuration

- Fixed the behavior of the **Formatted Value** field of a Discrete Alarm when updating a Domain. *This bug occurred since v4.0.62.*
- An Alarm that returns with its **AlarmVerify** property in False now can be re-enabled. *This bug occurred since v4.7.239.*
- The **Remove** ✖ option on the **User Fields** tab of an Alarm Server is now disabled when the selected User Field is not the last one. *This bug occurred since v4.5.167.*

9.5.2.2 AppBrowser

- Fixed the behavior of AppBrowser's help for non-native objects of **Elipse E3**, such as collections.
- Fixed in AppBrowser the icon of the **UaNodeId** property of OPC UA Tags. *This bug occurred since v4.8.92.*

9.5.2.3 CFR21

- Inserted limit values for number fields for user or group options and Domain security. *This bug occurred since v1.20.304.*

9.5.2.4 Database

- SQL Server's connection **String** is not deleted anymore when switching the window with the **Change connection string** option enabled. *This bug occurred since v4.5.56.*
- Oracle databases configured to use the **TIMESTAMP** data type are also forced to use a native ADO Driver, when executing an application and when in **Elipse E3 Studio** as well. *This bug occurred since v2.5.21.*
- Fixed an error in the **Test Connection** option on the **Configuration** tab of a Properties Window of a database, which was not updating when switching the type of database. *This bug occurred since v4.6.67.*
- Oracle's reserved words are now surrounded by brackets, thus can be used as names of Fields, Tables, or Indexes, among others.

9.5.2.5 Demonstration Application

- A few windows on **Elipse E3** Demo application were translated to English.

9.5.2.6 Documentation

- Added a new **E3DBEngine** section on **E3 Tweak User's Manual** with an option to disable thread pool, which was previously documented on **E3Run** section. *This bug occurred since v4.6.118.*
- Fixed several links on **Elipse E3** documentation.
- Fixed the description of the *Shift* parameter on **KeyDown** and **KeyUp** events of Screens and Screen Objects on **Elipse E3 Reference and Scripts Manual**, which wrongly indicated a combination of a key with a mouse click. *This bug occurred since v1.20.440.*
- Updated the documentation of methods on **Elipse E3 Reference and Scripts Manual** to clearly state the behavior of a method in cases where some of its parameters is omitted. *This bug occurred since v2.5.194.*
- Changed the note on the **IIf** method on **Elipse E3 Reference and Scripts Manual** to fix the example expression of its *Condition* parameter. *This bug occurred since v3.5.271.*
- Fixed the description of OPC UA Block Tag's **WriteEx** method on **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v4.8.161.*
- Added descriptions for **AddField** and **RemoveAll** methods of the Collection of Storage Fields on **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v4.0.13.*
- Fixed the description of the **GetTickSpacing** method of the Axis on E3Chart's Collection of Axes on **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v1.20.275.*

- Fixed the call to a Pen's **Connect** method in the description of Pen's **ScaleX** and **ScaleY** properties on **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v1.20.281*.

- Fixed the description of the **MaxGapTime** property of an E3Chart's Pen on **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v3.5.162*.

- Fixed the default value of the **BkColor** property of an E3Chart's Pen on **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v1.19.87*.

- Fixed the links to the **Item** method of E3Chart's Collection of Axes on **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v4.5.119*.

- Fixed the description of **GetTickSpacing** and **SetTickSpacing** methods on **Elipse E3 Reference and Scripts Manual** to state that these methods return or configure divisions of an E3Chart's scale, not subdivisions.

- Updated the description of the **ReferenceLineStyle** property on **Elipse E3 Reference and Scripts Manual** to state the number values of each one of the options for this property. *This bug occurred since v4.8.53*.

- Fixed the spelling of the **DblClick** event on **Elipse E3 Reference and Scripts Manual**.

- Fixed the style of the description of the **RemoveSubCondition** method of a Discrete Alarm's Collection of Subconditions on **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v4.0.192*.

- Updated the description of the **GetAlarm** method, common to all Alarm Sources, to state the Discrete Alarm Source on **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v4.0.192*.

- Updated the **Elipse E3 Reference and Scripts Manual** to contain information about the Source object returned by several properties of Screen objects and MS Forms.

- Updated topic **Layer** on **Elipse E3 Tutorial Advanced** to fix an information that Screen's **Layer** property, when configured to 0 (zero), hides all Screen objects. *This bug occurred since v4.7.120*.

- Updated topic **Screens and Screen Objects - Screen Objects - General Configurations - Layers** on **Elipse E3 User's Manual** with information about the new configuration screen for Screen layers. *This bug occurred since v4.5.61*.

- Fixed the content of topic **Domains - Configuration - Security Tab** on **Elipse E3 User's Manual**. *This bug occurred since v4.8.205*.

9.5.2.7 Domain, E3 Server, and Hot-Standby

- Implemented mechanisms in **E3 Server** to disconnect slow or hanged clients.

- Reduced the memory usage of pending packets in REC communication when compression is enabled. *This bug occurred since v2.5.151*.

9.5.2.8 Domain Verifier

- Fixed a problem on the progress window, which captured the focus of messages during a verification of objects.

9.5.2.9 E3 Admin

- **E3 Admin** submenus were standardized to follow the same drawing style of the main menu. *This bug occurred since v3.0.348*.

- Fixed the border of tabs on the window with Domain options of **E3 Admin**. *This bug occurred since v3.5.200*.

9.5.2.10 E3 Tweak

- Changed the title of the **Progress indicator window** option to **Hiding of progress indicator window**, for clarity. *This bug occurred since v3.2.184*.

9.5.2.11 E3Alarm

- Fixed the logic to enable or disable the option to remove a Connection. *This bug occurred since v4.7.163*.

- Fixed the update of **Filters** and **Connections** tabs when selection changes from an E3Alarm or Alarm Filter to another. *This bug occurred since v4.7.155*.

9.5.2.12 E3Browser

- Fixed an error where the tooltip of Field titles may hang over the screen if the shortcut key ALT + TAB is used to switch among windows. *This bug occurred since v1.0.15*.

- Users cannot configure properties of an E3Browser with invalid values anymore. *This bug occurred since v1.19.87*.

9.5.2.13 E3Chart

- Fixed E3Chart's **FitPen** method to accept the name of a Pen and also a numeric index. *This bug occurred since v1.20.126.*
- Fixed a problem on the options of the **Legend** tab of the Properties Window, which were not displayed enabled when this window was opened from within a Report. *This bug occurred since v1.19.193.*
- Fixed the default values of the **BackColor**, **TextColor**, and **HeaderTextColor** properties of a Legend. *This bug occurred since v1.20.55.*
- Fixed the behavior of the *ForeColor* parameter of the **ResetConfig** method and also its usage on main Axes. *This bug occurred since v1.20.275.*
- Changed the layout of the **Legend** tab on Properties Window and created a new window with two tabs for additional configurations. *This bug occurred since v4.8.123.*
- Added an option to configure Legend's **ShowBackground** property using the Properties Window. *This bug occurred since v1.20.55.*
- Removed the option to configure a color on the configuration window of the source of a Legend. *This bug occurred since v4.8.231.*
- Fixed a problem with Legend's **ShowBackground** property, which was not saved in **Elipse E3 Studio**. *This bug occurred since v1.20.55.*
- The edition field of a Legend's Source on the More settings window is now read-only. *This bug occurred since v4.8.231.*
- Fixed the effect of the **ResetConfig** method on the visual reference options of Axes. *This bug occurred since v4.8.19.*
- Fixed the effect of the **ResetConfig** method on the sources of Scales. *This bug occurred since v1.19.191.*
- Now the **ResetConfig** method configures the **ShowBorder** property to its default value, which is True. *This bug occurred since v4.8.12.*
- Fixed a problem that prevented configuring negative values for reference lines on the **Visual Reference** tab of a Properties Window. *This bug occurred since v4.8.19.*
- Fixed the keyboard focus on the tabs of a Properties Window, which could not return to the tab when clicking an option on that tab. *This bug occurred since v1.20.280.*

9.5.2.14 ElipseX Libraries

- Users are not allowed to insert Alarm Servers in XObjects anymore. *This bug occurred since v1.18.33.*
- Implemented support for loading in **Elipse E3 Studio** instances of XFolders of libraries not found. *This bug occurred since v4.8.36.*
- Suppressed a script error message on the **Insert** contextual menu. *This bug occurred since v4.8.159.*
- Blocked the insertion of Alarm Sources in definitions and instances of XObjects. *This bug occurred since v3.5.248.*

9.5.2.15 Expressions

- Fixed the behavior of quality and timestamp in expressions with the **IIf** method of **E3Globals** module. *This bug occurred since v3.5.164.*
- Implemented a previous validation of the number of parameters on methods of expressions in Links. *This bug occurred since v1.0.16.*

9.5.2.16 Find and Replace

- Implemented a feature of finding and replacing in User Events. *This bug occurred since v1.19.124.*
- Changed the option to replace only on the selected results. *This bug occurred since v2.0.88.*
- The find and replace tool now shows the name of the property and not a column's index, which was wrong, for the properties of a Storage Field. *This bug occurred since v3.1.11.*
- Fixed a problem when replacing values in Link fields. *This bug occurred since v3.5.127.*
- Fixed an error in which the **Replace All** option was not working correctly with objects in the same hierarchical level. *This bug occurred since v3.1.1.*
- The **Match case** option is correctly respected when performing a replacement in a **String**. *This bug occurred since v3.5.130.*
- The **Result** column on the results window of finding and replacing now must update correctly according to the executed operation. *This bug occurred since v2.0.88.*

- A Formula View now updates correctly when performing a replacement, and users can now find and replace in the **Type** and **Restriction** fields of Formulas. *This bug occurred since v2.0.88*.
- Script tabs are now updated correctly when performing replacements in Picks or in scripts. *This bug occurred since v2.0.52*.
- Only an Alarm Server now returns results for searches for names of User Fields of Alarm Servers. *This bug occurred since v4.5.108*.
- Now users cannot perform a replacement in names of objects that cannot be renamed. *This bug occurred since v4.7.6*.
- Now users can select correctly results of searches in Filters and Connections of E3Alarm and Alarm Filter objects.
- The selection of search results in User Fields now works correctly. *This bug occurred since v4.5.167*.

9.5.2.17 Historic

- Removed the window to edit Historic indexes, also used for primary keys. *This bug occurred since v1.19.87*.

9.5.2.18 Import and Export

- Fixed an import error of a Viewer object. *This bug occurred since v2.5.95*.

9.5.2.19 Interface

- Fixed the size of several combo boxes in many **Elipse E3** windows.
- Replaced combo boxes for colors by the option ⬚, which opens Windows color selection window. *This bug occurred since v1.20.210*.
- Fixed the color used as background for areas of the filling window and for Legend's scroll bar of an E3Chart.
- Standardized the capitalization style of titles of windows presented by **Elipse E3**.
- Standardized window titles of **Panel**, **DB**, **IODrv**, **E3Sys**, **Studio**, **E3Chart**, **E3Alarm**, **E3Admin**, and **E3Playback** modules relative to the capitalization of words.
- Fixed a failure when handling mouse's right-click in controls of type **TreeControls**. *This bug occurred since v1.20.33*.
- Fixed problems in shortcut keys on E3Chart, Alarms, and Database windows.
- Fixed duplicated shortcut keys.
- The **Save** option now has a CTRL + S shortcut key and the **Save All** option now has a CTRL + SHIFT + S shortcut key. *This bug occurred since v1.19.87*.
- Fixed the update of ➕ and ❌ options of object Views. *This bug occurred since v2.0.39*.
- Fixed the removal of the asterisk in the name of a project or Folder after saving them. *This bug occurred since v4.7.66*.
- The **Delete** command on contextual menus now works with multiple selections. *This bug occurred since v1.21.115*.

9.5.2.20 Links

- Fixed the behavior of Analog Links changed at run time that could not correctly detect whether the associated property is a color or not. *This bug occurred since v1.20.366*.
- Fixed the optimization of communication for remote Links of ElipseX Properties. *This bug occurred since v4.8.184*.

9.5.2.21 OPC UA Driver and OPC UA Client

- Fixed the behavior of historical OPC UA queries with less than 200 records, called from within Reports. *This bug occurred since v4.5.176*.
- Disabled the option to select a server on an OPC UA Driver's View. *This bug occurred since v4.8.92*.
- Fixed the way pending historical queries are finished when a connection with an OPC UA server fails. *This bug occurred since v4.5.176*.
- Now the OPC UA Client reconnects when there is an invalid session error. *This bug occurred since v4.5.176*.
- Fixed the categorization of the **Bit00** property of OPC and OPC UA Tags on the Properties List. *This bug occurred since v4.6.99*.
- Fixed the handling of *Node IDs* of type **GUID** in OPC UA Client. *This bug occurred since v4.5.166*.

9.5.2.22 Other Corrections

- Fixed the possibility of inserting Alarms in Queries, Alarm Filters, Reports, and Line Printers, where this operation must be blocked. *This bug occurred since v3.5.248*.

- Blocked the insertion of Alarm Sources in definitions of XFolders and instances of XObjects. *This bug occurred since v3.5.248.*
- Users cannot configure properties with invalid values anymore. *This bug occurred since v1.18.124.*
- Fixed a GPF that could occur in **E3Run** after multiple calls to the **TypeName** method in child objects of the Application object. *This bug occurred since v3.1.166.*

9.5.2.23 Query

- Fixed a memory leak when destroying a Query object after accessing the **UaNamespaceArray** property. *This bug occurred since v4.5.160.*

9.5.2.24 Screen Objects

- Changed the behavior of cut and copy commands to provide an improved visual feedback for users. *This bug occurred since v1.0.16.*
- Setting an invalid value to the **X**, **Y**, **Width**, or **Height** properties of Screens and Screen Objects now generate a script error.
- Fixed the option to move (*pan*) a Screen object when scroll bars of a Screen are visible and enabled. *This bug occurred since v4.8.87.*
- Fixed the behavior of a Command Button when moved or resized using its own **MouseDown** event.

9.5.2.25 Scripts

- Fixed the behavior of Multiple Links created at run time. *This bug occurred since v4.6.98.*
- The prefix "s" was removed from the *Index* parameter of methods of E3Alarm and Alarm Filter objects. *This bug occurred since v4.7.63.*
- Fixed the access to the **Item** method of server objects, which could be blocked on read-only **Elipse E3 Viewers** or Remote Domains. *This bug occurred since v4.0.62.*
- Fixed a possible failure of a Domain when using the **Save** command in **Demo** mode. *This bug occurred since v1.17.1.*
- Fixed the usage of **VARIANT** values with **VT_INT** and **VT_UINT** data types in properties, such as a Tag's **Value** property. *This bug occurred since v1.20.86.*
- Fixed the behaviour of the **Application.GetObject** method to always check the path passed on the *ObjectPath* parameter to the end, not accepting that it finishes in a property that is not an object. *This bug occurred since v1.18.155.*
- Blocked the creation of definitions of ElipseX objects (XControls, XObjects, and XFolders) in projects or folders using Studio's **CreateFile** method. *This bug occurred since v4.0.102.*

9.5.2.26 Scripts Editor

- The option to compile all scripts is enabled if the object contains at least one script, regardless of the user-selected event. *This bug occurred since v2.0.54.*
- Fixed the update of script's toolbar when returning the focus to **Elipse E3 Studio**. *This bug occurred since v4.0.10.*
- Fixed a problem during the resizing of **Elipse E3 Studio** window that, when showing the scroll bar, hid the comment on the viewing window of scripts. *This bug occurred since v2.0.61.*
- Fixed the focus that could move to Scripts Editor when removing items using Organizer. *This bug occurred since v2.0.147.*
- Focus now remains in the description field of an event if there is no actions in the selected event. *This bug occurred since v2.0.52.*
- Fixed the drawing of Scripts Editor's toolbar when in floating mode. *This bug occurred since v2.0.84.*

9.5.2.27 Storage

- Fixed duplicated names in Storage Fields when created in Storage's View. *This bug occurred since v3.5.75.*
- Fixed a behavior of the **Design** tab to show all changes performed by script in the Collection of Fields. *This bug occurred since v3.0.24.*

9.5.2.28 Studio

- Focus on child objects of **Elipse E3 Studio** (Organizer, Gallery, Properties List, and Object Counting) and on Views (Scripts Editor, and Screen's **Design** tab) is kept when using the ALT + TAB shortcut key to toggle focus among

applications, with the possibility of moving through **Elipse E3 Studio** windows using the F6 key. Organizer always receives focus when **Elipse E3 Studio** starts, if visible, whether it is docked or floating. When one of the child windows is opened, by using the corresponding option on the **View** menu, that one always receives the focus. In addition, focus is kept when closing windows and Views.

- The title of the warning window for copying and pasting Links was changed to "Existing Links". The question on this window was simplified, as well as the titles of buttons, by using an existing template for windows. *This bug occurred since v2.5.89.*
- Changed the behavior of **Save** and **Save All** commands in **Elipse E3 Studio** to always remain available and not change focus during edition. *This bug occurred since v2.0.99.*
- Fixed the loading of ElipseX definitions occurring in **Elipse E3 Studio** when saving any ElipseX on the same library. *This bug occurred since v4.6.104.*
- Fixed the edition of **VARIANT** values in Picks and Digital Links to auto-detect the data type of the typed value, instead of rejecting values incompatible with the current data type. *This bug occurred since v1.19.87.*
- Fixed a problem on the file protection window, which did not allow operations via keyboard after adding or removing a protection. *This bug occurred since v3.2.49.*
- Fixed a failure on Application Wizards and on Script Documentation Wizards using the ALT + C shortcut key to finish the Wizard execution. *This bug occurred since v1.21.42.*
- Adjusted the sizes of Properties Windows for when DPI (*Dots Per Inch*) is different from 96. *This bug occurred since v1.20.15.*
- Fixed the internal border on Picks and on the **Configuration** tab of Database's Properties Window to not cut the text if DPI (*Dots Per Inch*) is greater than 100%. *This bug occurred since v1.19.89.*
- Fixed the drawing of internal buttons of edition boxes, which could be misplaced with a DPI (*Dots Per Inch*) greater than 96 (100%). *This bug occurred since v4.7.145.*
- Fixed an unexpected quit in **Elipse E3 Studio** when registering libraries with definitions that use other definitions.
- Users now cannot trigger some shortcut keys when pressing more keys than needed. *This bug occurred since v4.7.119.*
- Fixed the behavior of the CTRL + A shortcut key to occur on the focused window and not on the last opened View but without focus. *This bug occurred since v3.1.79.*
- Implemented a switch on tabs of the Properties Window by using the keyboard and fixed the keyboard focus when opening that window on a tab that is not the first one.
- Fixed the switch among tabs of a View using shortcut keys CTRL + PAGE UP or PAGE DOWN, which locked on the **Scripts** tab.
- Implemented a handling of **Elipse E3 Studio** shortcut keys on any tab of the Properties Window. *This bug occurred since v0.1.29.*
- Fixed how shortcut keys work on edition boxes. *This bug occurred since v3.2.209.*
- Fixed the behavior of the **Rename** option of the contextual menu of the **Design** tab of objects, which had no effect. *This bug occurred since v1.20.371.*
- Fixed how the CTRL + A shortcut key worked on edition boxes of controls of type **Tree Controls**. *This bug occurred since v2.0.117.*
- The **Cut** and **Copy** options of **Elipse E3 Studio**'s toolbar now are enabled only when these options are allowed. *This bug occurred since v1.22.25.*
- Users cannot open a duplicated Find and Replace window anymore. *This bug occurred since v4.5.36.*
- Fixed how the ALT + F4 shortcut key works when a Screen or XControl Definition is selected. *This bug occurred since v3.0.36.*
- Contextual menus of projects are now equivalent in Organizer and in Explorer. *This bug occurred since v3.0.239.*
- The mini-dialog to edit Links on the **Links** tab of the Properties Window now accepts global shortcut keys. *This bug occurred since v1.0.16.*
- Fixed the behavior when editing the name of an object on the Properties Window and on the Properties List. *This bug occurred since v3.5.81.*
- Focus on the object clicked on Organizer is performed correctly when the object with previous focus is not on Organizer's visible area, whether in floating or sliding mode. *This bug occurred since v1.20.301.*
- Removed inappropriate options from the contextual menu. *This bug occurred since v3.0.242.*
- Removed the **Save** command, which was duplicated in projects. *This bug occurred since v3.0.231.*
- Fixed a GPF when editing Links with multiple selection. *This bug occurred since v1.21.98.*

- Items are not copied duplicated anymore when in multiple selection. The **Copy** option of contextual menus now correctly appears when in multiple selection. *This bug occurred since v1.19.45.*
- Now users cannot select a Query anymore when in edition mode of a Screen. *This bug occurred since v3.0.220.*
- Fixed the focus on the selected object with a single or double mouse click in Organizer when focus comes from another application. *This bug occurred since v5.0.191.*

9.5.2.29 Translation

- Fixed a clipped icon on the **Style** tab of E3Browser's Properties Window. *This bug occurred since v3.2.87.*

9.5.2.30 Users

- Fixed the information, Domain or server, displayed on login and password change windows. *This bug occurred since v1.18.155.*

CHAPTER 10 Version 4.8

This section contains updates of version **4.8** of **Elipse E3**. To check all updates of this version, please refer to the next topics of all Builds or, to check updates of a Build relative to a previous one, please refer to that specific topic.

10.1 Version 4.8 Build 358

This section contains updates of version **4.8.358** of **Elipse E3** relative to version **4.8 Build 355**.

10.1.1 Fixed Bugs

This section contains bugs fixed in version **4.8.358** of **Elipse E3**.

10.1.1.1 Links

- Fixed a behavior of Links, which could discard a value that changed exactly during the reconnection of that Link. *This bug occurred since v3.0.201.*

10.2 Version 4.8 Build 355

This section contains updates of version **4.8.355** of **Elipse E3** relative to version **4.8 Build 352**.

10.2.1 New Features

This section contains new implementations in version **4.8.355** of **Elipse E3**.

10.2.1.1 E3DataAccess Library

- **E3DataAccess Library** is now declared as **SafeForScripting** and **SafeForInitializing** to avoid warnings when used inside Internet Explorer or inside an ActiveX.

10.2.2 Fixed Bugs

This section contains bugs fixed in version **4.8.355** of **Elipse E3**.

10.2.2.1 E3DataAccess Library

- Fixed a failure in **E3DataAccess Library** when unloading inside a **Elipse E3 Viewer**. *This bug occurred since v4.5.213.*

10.3 Version 4.8 Build 352

This section contains updates of version **4.8.352** of **Elipse E3** relative to version **4.8 Build 336**.

10.3.1 Fixed Bugs

This section contains bugs fixed in version **4.8.352** of **Elipse E3**.

10.3.1.1 CFR21

- Fixed the message of changing a user's password when editing via **File - Users** menu in **Elipse E3 Studio** or when using Viewer's **UserAdministration** method. *This bug occurred since v4.8.324.*

10.3.1.2 OPC UA Driver and OPC UA Client

- Fixed the implementation of the **UaNodeId** property of Query Field, OPC UA Tag, and OPC UA Block Tag objects. *This bug occurred since v4.5.166.*

10.3.1.3 Other Corrections

- Fixed a GPF that could occur in **E3Run** after multiple calls to VBScript's **TypeName** function in child objects of the Application object. *This bug occurred since v3.1.166.*

10.3.1.4 Users

- Implemented a reset mechanism for the number of login failures when auto-unblocking a user by time. *This bug occurred since v1.20.355.*
- Implemented a reset mechanism for the number of login failures when unblocking a user's account. *This bug occurred since v1.20.355.*

10.3.1.5 Viewer

- Fixed a memory leak in the GDI library, which occurred on **Elipse E3 Viewer** when opening windowed Screens or Frames. *This bug occurred since v3.0.233.*

10.4 Version 4.8 Build 336

This section contains updates of version **4.8.336** of **Elipse E3** relative to version **4.8 Build 321**.

10.4.1 New Features

This section contains new implementations in version **4.8.336** of **Elipse E3**.

10.4.1.1 CFR21

- Implemented a detailed record of all changes on the user database and additionally of the event record.
- Implemented an option so that the user's name and password cannot be the same on the **Security** tab of **E3 Admin**'s Domain options.

10.4.1.2 Documentation

- Updated the **Elipse E3 Tutorial Developer**.
- Updated the **Elipse E3 Tutorial Advanced**.

10.5 Version 4.8 Build 321

This section contains updates of version **4.8.321** of **Elipse E3** relative to version **4.8 Build 300**.

10.5.1 Fixed Bugs

This section contains bugs fixed in version **4.8.321** of **Elipse E3**.

10.5.1.1 CFR21

- Fixed the **Domain changed** event, which is now registered by **E3 Server**'s session, also for anonymous users. *This bug occurred since v3.0.310.*

10.5.1.2 Database

- **E3Run** does not lock anymore when finishing a database with many active timers. *This bug occurred since v4.6.108.*

10.5.1.3 ElipseX Libraries

- Fixed a GPF that could occur when keeping references to an ElipseX object whose library was updated. *This bug occurred since v4.8.133.*
- Now ElipseXs with syntax errors in scripts or in the configuration of Tag behavior also allow loading instances in **Elipse E3 Studio**. *This bug occurred since v4.8.159.*

10.5.1.4 OPC UA Driver and OPC UA Client

- Fixed the import process of OPC UA Tags, because the **DisplayName** and **BrowseName** fields were inverted. *This bug occurred since v4.5.99.*
- Fixed the behavior of OPC UA Historical Queries with less than 200 records, called from inside Reports. *This bug occurred since v4.5.176.*

10.5.1.5 Screen Objects

- Fixed a problem with redrawing XControls and Groups when a Screen was resized. *This bug occurred since v1.18.155.*

10.6 Version 4.8 Build 300

This section contains updates of version **4.8.300** of **Elipse E3** relative to version **4.8 Build 239**.

10.6.1 New Features

This section contains new implementations in version **4.8.300** of **Elipse E3**.

10.6.1.1 Documentation

- Added **Windows Server 2016** to the list of supported operating systems throughout **Elipse E3** documentation.
- Updated the description of several properties on **Elipse E3 Reference and Scripts Manual** to indicate that these properties can be changed at run time, as long as the object be deactivated and then activated.
- Renamed the **E3 Tutorial Basic** to **Elipse E3 Minicourse Tutorial**.
- Changed to full names on topic titles of **Elipse E3 Release Notes** the indications of update versions starting with version 4.7.

10.6.1.2 E3Alarm

- Implemented a new way of interaction to configure colors for several alarm and severity statuses via scripts.

10.6.1.3 OPC UA Driver and OPC UA Client

- Updated the OpenSSL library, used in **Elipse E3** OPC UA Client, to version 1.0.2k (1.0.2.11).

10.6.1.4 Protection Device

- Updated the installer of HASP drivers (haspdinst) to version 7.54.

10.6.2 Fixed Bugs

This section contains bugs fixed in version **4.8.300** of **Elipse E3**.

10.6.2.1 AppBrowser

- Fixed in AppBrowser the assembling of Tag access inside Screens to other items of a Screen, so that they do not use the "Screen" path. *This bug occurred since v4.7.59.*
- Implemented a sort order on items inside AppBrowser's **Tasks** node. *This bug occurred since v2.0.50.*
- Fixed the sort order of items from different projects in AppBrowser. *This bug occurred since v4.8.9.*

10.6.2.2 Documentation

- Added a note in the **GradientStyle** property, common to Screen objects, indicating that this property is not available for the Picture, Dynamic Move, and Dynamic Rotate objects on **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v3.5.187.*
- Fixed the description of the **fmTextAlignCenter** option of the **TextAlign** property of MS Forms objects Checkbox, Text, and Option Button on **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v1.20.449.*
- Fixed the name of the **Error** event, common to MS Forms Screen objects on **Elipse E3 Reference and Scripts Manual**, which was incorrectly identified as **OnError**. *This bug occurred since v3.2.118.*
- Fixed the description of Viewer's **LoadFormulaDlg** method to contain more precise information about its parameters and return value on **Elipse E3 Reference and Scripts Manual**.
- Updated the description of columns **MinRecTime**, **MaxRecTime**, **Dead Band**, and **Unit** on topic **Storage - Settings** of **Elipse E3 User's Manual**. *This bug occurred since v1.21.1.*
- Updated the picture of AppBrowser on **Elipse E3 User's Manual** where it displays the **Tasks** node, and also updated the descriptive text on **Elipse E3 User's Manual**. *This bug occurred since v4.5.252.*
- Updated the description of several properties on **Elipse E3 Reference and Scripts Manual** to add information that these are read-only properties.
- Removed examples referring to several properties of Screen object Dynamic Move on **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v1.20.1.*
- Fixed the formatting of several styles on **Elipse E3** documentation to avoid orphan lines in **PDF** format. *This bug occurred since v4.8.24.*

10.6.2.3 E3Alarm

- Fixed a GPF that occurred when switching Screens in E3Alarm events. *This bug occurred since v3.1.128.*
- Fixed a GPF that occurred when storing E3Alarm's internal objects in an Internal Tag. *This bug occurred since v3.2.161.*

10.6.2.4 E3Browser

- E3Browser's **MouseUp** event now also happens for right mouse button, after handled by the control. *This bug occurred since v0.1.3.*
- Fixed a GPF that occurred when storing E3Browser's internal objects in an Internal Tag. *This bug occurred since v1.20.254.*

10.6.2.5 E3Chart

- The styles listed on the combo box for configuring the style of legend's column border now match the drawn style. *This bug occurred since v4.8.231.*

10.6.2.6 Interface

- Standardized some messages with names of window fields to end with colons.
- Fixed repeated keyboard shortcuts on configuration windows of E3Chart's Pens and Axes and on Pick **Print Report**. *This bug occurred since v3.2.90.*
- Fixed meaningless error messages when validating number fields on several **Elipse E3** windows. *This bug occurred since v2.5.60.*
- Standardized uppercase writing for Screen and Report, when referring to the type of **Elipse E3** object with the same name.

10.6.2.7 OPC UA Driver and OPC UA Client

- Revised the subscription mechanism of the OPC UA Client, specially the way of handling error situations. *This bug occurred since v4.8.92.*

10.6.2.8 Query

- The **HasFocus**, **MouseOver**, and **MouseOverChild** properties and the **SetFocus** and **GetChildObject** methods were hidden for Query, Alarm Filter, and Line Printer objects. *This bug occurred since v1.19.87.*

10.6.2.9 Screen Objects

- Fixed the behavior of Connectors changed on Screen's **OnPreShow** event. *This bug occurred since v3.5.143.*

10.6.2.10 Scripts

- Standardized the **Item** method of E3Chart and E3Browser collections that were displayed as properties. *This bug occurred since v0.1.20.*
- Fixed the update of combo boxes on the **Scripts** tab, which could occur when editing another object. *This bug occurred since v4.8.159.*

10.6.2.11 Studio

- The **Links** tab on the Properties Window now does not display indexed properties anymore.

10.6.2.12 Translation

- Removed an unnecessary space on the message "Unexpected change in topology" of the Self-Healing module. *This bug occurred since v4.8.239.*

10.6.2.13 Viewer

- Closed all inactive connections left by **Elipse E3 Viewers** trying a connection with several servers and implemented a time limit of 20 seconds in **E3 Server** for connections without activity. *This bug occurred since v1.21.117.*

10.7 Version 4.8 Build 239

This section contains updates of version **4.8.239** of **Elipse E3** relative to version **4.7 Build 308**.

10.7.1 New Features

This section contains new implementations in version **4.8.239** of **Elipse E3**.

10.7.1.1 CFR21

- Implemented tracking events for auditing the creation, edition, and removal of users and groups.
- Changed the interface to configure the Registration of Events to edit and validate the Events Table before applying user-performed changes.

10.7.1.2 Data Server

- Implemented a small reduction (approximately 2%) in the memory usage of Internal Tags with retentivity turned off.

10.7.1.3 Documentation

- Updated the note on topic **How E3 Tweak Works** of **E3 Tweak User's Manual** to enforce that a writing privilege on Windows Registry is mandatory for all Windows versions starting with **Windows Vista**.
- Standardized the names of all **Elipse E3** documents and also references to these names throughout the documentation.
- Updated the **IMEMode** property of MS Forms Screen objects Text Box, List Box, and Combo Box on **Elipse E3 Reference and Scripts Manual**.
- Updated the **Enum**-type properties of all **Elipse E3** objects so that they contain their default value on **Elipse E3 Reference and Scripts Manual**.
- Updated **Elipse E3** Tutorials by including the Taiwan branch and excluding the USA branch.
- Updated **Elipse E3 Minicourse Tutorial**.
- Updated the topic about manually creating CSV files to import and export objects on **Elipse E3 User's Manual**.
- Added a note on **Elipse E3 User's Manual** about the possibility of having an empty source on a Link.
- Several sub-topics were reordered on several **Elipse E3** documents so that these sub-topics are sorted according to their language.
- Added a note on topic **Screens and Screen Objects - General Configurations - Group or Ungroup** of **Elipse E3 User's Manual** about the way to leave the edition mode of a group of Screen objects.
- Added on topic **Frequently Asked Questions - Remote Domains** of **Elipse E3 User's Manual** information from the *KB about Remote Domains*.

10.7.1.4 Domain, E3 Server, and Hot-Standby

- Implemented in **E3Run** a block for re-entrant script events when the process could be terminated by stack overflow.

10.7.1.5 E3Alarm

- Created the **EnableSortMarker** property, which enables or disables an indication of the sort order of E3Alarm's column.

10.7.1.6 E3Chart

- Implemented an option to draw Pens in high quality by using the GDI+ library. This option can be configured using E3Chart's **RenderQuality** property.
- Added the **ShowBorder** property, which hides or shows E3Chart's external border.
- Added elements for visual reference on E3Chart, **Normal Band** and **Reference Line**.
- Added the **BorderStyle** and **TextColor** properties that configure, respectively, the border style and the text color of an E3Chart's Legend.
- Implemented a visual customization of the header of an E3Chart's Legend. Now users can change Legend's border style (the **HeaderBorderStyle** property), text color (the **HeaderTextColor** property), and column's background color (the **HeaderBackColor** property). Users can also change the text color (the **TitleColor** property) of an E3Chart's title.
- Added the **Font** property, which allows configuring the name, style, and size of the font of an E3Chart's Legend.

- Added the **ScaleYMax** e **ScaleYMin** columns on E3Chart's Legend, which display maximum and minimum values of the vertical scale, respectively, configured in each Pen.

10.7.1.7 ElipseX Libraries

- Added the **IconPath** property, which allows configuring an icon representing the instances of an ElipseX.
- Created a new ElipseX, the **XFolder**, a server object that allows freely inserting children objects only in its instances.
- Implemented in XObject and XControl objects the **InstanceName**, **FriendlyName**, and **Contexts** properties. The **DefaultIsAlarmArea** property was added only to XObject definitions.
- Added the **EnableTagBehavior** property on ElipseX definitions (XObject, XFolder, and XControl). When enabled, it turns an object into a Tag, so that the **Value**, **Quality**, and **Timestamp** properties, and optionally **ActiveSource**, are always propagated together.
- Implemented a communication optimization for remote Links for ElipseX properties.

10.7.1.8 Formula

- Added the **DataSourceSize** e **ValueSize** properties, which allow configuring the size of fields.

10.7.1.9 Installation

- Updated the installer of HKCustomer to version 5.5.30 and changed its name to HKCustomer.exe.
- Added the **/NOACP** option, which can be passed as a parameter to **Full**, **Elipse E3 Viewer**, and **WebViewer** installers. When this option is used, MS Activex Control Pad is not installed.
- Created the **InstallACP** property on E3Downloader, which allows disabling the installation of MS ActiveX Control Pad if configured to False.

10.7.1.10 Interface

- Implemented the opening of contextual menus on E3Alarm and on **Elipse E3 Studio** by using the application key or the key combination SHIFT + F10.

10.7.1.11 Links

- Now, a Digital Link in a **Variant**-type property, such as the **Value** property of a Tag, allows editing the data type of its linked values.

10.7.1.12 OPC UA Driver and OPC UA Client

- Implemented the security profile **Basic256Sha256** in the **SecurityPolicy** property.
- Updated OPC UA ANSI C Stack to official version 1.02 Build 336, revision 1.
- Created the OPC UA Subscription, OPC UA Tag, OPC UA Block, and OPC UA Block Element objects for real-time communication via OPC UA.
- Updated OpenSSL library (used by the OPC UA client) on **Elipse E3** to version 1.0.2j (1.0.2.10).
- Now a new **Elipse E3** installation creates an OPC UA client certificate with the name of the computer directly on the name displayed on the certificate.

10.7.1.13 Other Implementations

- Names of enumerations in several properties (**TextAlignment**, **VertTextAlignment**, **FillStyle**, **GradientStyle**, **BackgroundStyle**, and **BorderStyle**) of Screen objects where converted to uppercase.
- **HeapLog** statistics now display in details the number of allocated and free blocks per size.
- Optimized the loading and activation of folders with hierarchies of XFolders and XObjects.
- **Studio** and **E3Run** processes now have a special scheme to allocate memory, which leads to a considerable increase in performance (above 40%) in operations demanding allocation or release of large amounts of memory, such as when loading or unloading an application.
- Scripts of ElipseX instances are now shared, speeding up the activation time of objects and decreasing memory usage.
- Performed a small optimization in memory usage of **Elipse E3** objects (an improvement of approximately 2%).
- Improved the performance of creating Links in applications with many Links (more than 50000).
- Slightly reduced the memory usage of **Elipse E3** objects in general, also improving the loading or starting time of applications.

10.7.1.14 Protection Device

- Updated the installer of HASP drivers (haspdinst) to version 7.53.

10.7.1.15 Query

- Now the Query object also allows using Database, Storage, or OPC UA Driver objects that are inside XObjects.

10.7.1.16 Remote Domains

- Now **Elipse E3** logs and **E3 Admin**'s Statistics window indicate when a Remote Domain connection is in read-only mode.
- Implemented a more detailed log of connection failures of Remote Domain clients.

10.7.1.17 Screen Objects

- Implemented a pan feature of Screens on **Elipse E3 Studio** and on **Elipse E3 Viewer**.
- Implemented the reception of the middle mouse button value on **MouseUp** and **MouseDown** events.
- Added the **Reset Rotation Center** option to remove a modified rotation center of a Screen object.

10.7.1.18 Scripts

- Error messages of a script now identify the object and event where the error occurred, as well as the line number already adjusted inside the event code.

10.7.1.19 Studio

- Allowed multiple selection on **Elipse E3 Studio**'s **File - Open Project** menu.
- Now the **GetObject** method of **Elipse E3 Studio**'s Application object also returns **Elipse E3 Viewer**'s context objects.
- Implemented in **Elipse E3 Studio** the opening of Properties Window by using the standard shortcuts, ALT + ENTER and ALT + Double-click.
- Implemented the visualization (WatchWindow) and edition (Object Views) of 1D (unidimensional) arrays in **Variant**-type properties.
- Added the **Value** column to Views of Viewer and Data Server objects.

10.7.1.20 Translation

- Implemented an information about the real translation language of **Elipse E3** files.

10.7.1.21 Users

- Implemented an option to export the list of users directly in **E3 Admin**.
- Improved the user experience to force a confirmation when editing a password on Users window.
- Improved usability in **Elipse E3 Studio**'s User Permissions window.

10.7.1.22 Viewer

- Windows accessibility features shortcuts now are disabled when the **DisableTaskSwitching** property is enabled.

10.7.2 Fixed Bugs

This section contains bugs fixed in version **4.8.239** of **Elipse E3**.

10.7.2.1 Alarm Server and Alarm Configuration

- Fixed the behavior of Alarms inserted in OPC Drivers, where users cannot edit anymore the name of the condition nor the delay using OPC Driver View. *This bug occurred since v3.5.41.*

10.7.2.2 AppBrowser

- Optimized loading items with many children on the same level in AppBrowser.
- Fixed AppBrowser help for functions of **E3Globals** module in script contexts. *This bug occurred since v3.5.271.*

10.7.2.3 Data Server

- The **Value** property of Demo and Counter Tags was removed from Properties List. *This bug occurred since v1.0.9.*
- The Tag Timer's **RepeatInterval** property now is always formatted as h:min:s, in 24-hour format. *This bug occurred since v3.0.122.*

10.7.2.4 Demonstration Application

- Adjusted **Elipse E3**'s Demonstration application to remove all warnings displayed by the Domain Verifier. *This bug occurred since v4.5.33.*

10.7.2.5 Documentation

- Removed information about compatibility with E3Chart on Query's **AddField** and **RemoveField** methods and removed a text indicating that Query's **DataSource**, **Fields**, **GroupBy**, **Having**, **OrderBy**, **Table**, and **Where** properties were read-only but could be changed at run time on **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v1.20.1.*
- Fixed the description of Screen's **FillStyle** property, which is also common to Screen objects on **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v4.7.115.*
- Updated the descriptions of **BackupDiscardInterval**, **BackupDiscardTimeUnit**, **DiscardInterval**, **DiscardTimeUnit**, **EnableBackupTable**, **EnableDiscard**, **VerificationInterval**, and **VerificationUnit** properties, which are common to Alarm Server, Historic, and Storage objects, so that they indicate to which object they refer on **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v3.0.365.*
- Updated the exercise about expressions on chapter **Links** of **Elipse E3 Tutorial Developer**. *This bug occurred since v4.5.250.*
- Fixed the figure of Properties List that appears on chapter **Starting the Application** of **Elipse E3 Tutorial Developer**. *This bug occurred since v4.7.292.*
- Fixed a situation where some topics that should not be included on **Elipse E3** documentation in CHM were improperly added. *This bug occurred since v4.5.99.*
- Reintroduced a paragraph about context variables that was removed from **Elipse E3 User's Manual** on topic **Links**. *This bug occurred since v4.0.205.*
- Fixed the name of the property defining the line style of a Pen, **PenLineStyle**, on **Elipse E3 User's Manual** and on **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v3.5.98.*
- Removed the indication that the **Size** property cannot be changed after activating communication in I/O Block, OPC Block, and OPC UA Block objects on **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v1.20.237.*
- Added the value of the *ClassName* parameter for OPC UA Driver object in E3StudioApplication's **CreateFile** method on **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v4.5.204.*
- Fixed standard values of **GradientStyle** (Screen), **BorderStyle** (Scale), **MatchEntry** (List), **GridLinesType** (E3Browser), **LineStyle** (Report's Picture), and **Alignment** (Report's Text) properties on **Elipse E3 Reference and Scripts Manual**.
- Fixed the example script for the **GradientStyle** property of Screen object Scale on **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v3.2.140.*

10.7.2.6 Domain Verifier

- Now the object and Domain checker correctly identifies **Expression**-type Links to warn if there are **Reverse**- or **Bidirectional**-type Links. *This bug occurred since v3.0.110.*

10.7.2.7 Drivers and I/O Server

- Implemented support for two new types of **Variants**, **Integer** and **Unsigned Integer**, in I/O Server. *This bug occurred since v0.1.3.*
- Fixed the behavior of the Quality of values of Block Elements to reflect a bad quality (28) when the Element's index is out of the current value of the I/O Block. *This bug occurred since v1.0.9.*
- Changed the term "PLC Tag" by "I/O Tag" on the Tag Count window of I/O Drivers. *This bug occurred since v1.20.332.*

10.7.2.8 E3Alarm

- The list of alarms now is correctly updated after the **BannerMode** property changes at run time. *This bug occurred since v4.7.155.*

10.7.2.9 E3Chart

- Changed the search for Pen queries of an E3Chart to not display server queries. *This bug occurred since v1.20.105.*

10.7.2.10 ElipseX Libraries

- Fixed the behavior of the Screen's **OnShow** event to not prevent repositioning and resizing of XControls. *This bug occurred since v1.18.125.*
- Fixed Links accessing properties that are objects (**Parent**, **Screen**, etc.) in ElipseX instances. *This bug occurred since v1.18.147.*
- Fixed the selection of objects when deleting properties on an ElipseX definition. *This bug occurred since v1.20.75.*
- Improved the performance when loading Data Folders containing hierarchies of XObjects or XFolders. *This bug occurred since v4.5.197.*

10.7.2.11 Expressions

- Fixed the sharing of variables inside Link expressions. *This bug occurred since v1.0.16.*
- Changed the **BShl**, **BShr**, **GetBit**, and **SetBit** functions to accept unsigned 32-bit values and created the **LongToDword** e **DwordToLong** functions in scripts and expressions. *This bug occurred since v3.5.164.*

10.7.2.12 Gallery

- Fixed a problem with Gallery images that were displayed with a black background. *This bug occurred since v4.7.193.*

10.7.2.13 Installation

- Fixed the URL fields of **Elipse Software** website and the friendly name of components on digital signatures of **Elipse E3** files. *This bug occurred since v4.6.152.*

10.7.2.14 Interface

- Fixed a closing of the properties window of a Link (Analog, Digital, Table, or Discrete) performed by the Edit Links window. *This bug occurred since v1.21.54.*
- Removed a wrong icon from the **Configure Database** item of a Formula object's contextual menu. *This bug occurred since v3.0.158.*

10.7.2.15 Links

- Allowed expressions with context (*@(Context).Link*) to return an object when used in ElipseX properties. *This bug occurred since v4.0.106.*

10.7.2.16 OPC Client

- Now the import process of OPC Tags correctly suggests the creation of an OPC Group in an OPC Driver without Groups but with alarms. *This bug occurred since v3.5.41.*

10.7.2.17 OPC UA Driver and OPC UA Client

- Fixed a GPF on the OPC UA Client, which could occur when the network failed during a connection. *This bug occurred since v4.5.160.*
- Fixed a lock that could occur in OPC UA Client when connection time-out was equal to 1 ms and the client was activated and deactivated quickly. *This bug occurred since v4.5.160.*
- Fixed the conversion of UA status to an **Elipse E3** quality. *This bug occurred since v4.5.192.*
- Adjusted CPU usage of OPC UA Client for a very low connection time-out, such as 1 ms. *This bug occurred since v4.5.166.*
- Fixed a GPF that could occur in OPC UA Client when stopped during a connection or reconnection. *This bug occurred since v4.5.166.*

10.7.2.18 Other Corrections

- Fixed a memory leak in **E3 Server** when connecting or disconnecting clients. *This bug occurred since v4.6.47.*
- Fixed the **ProcessInfo.<process>(x64)** log, which was truncating the value of **PVT**, **WKS**, **PPL**, and **NPP** statistics when they exceeded 4 GB. *This bug occurred since v4.0.29.*

10.7.2.19 Playback

- Fixed a GPF when performing a Screen change in **Elipse E3 Viewer** while there were E3Playback tool bars floating. *This bug occurred since v3.1.190.*

10.7.2.20 Remote Domains

- Adjusted messages about writing access failures to a server to only mention "Viewer Only" when blocking is in **Elipse E3 Viewer** itself. *This bug occurred since v3.0.201.*

10.7.2.21 Screen Objects

- Fixed the procedure of dragging and dropping of the scroll bar cursor when on very large Screens and with maximum zoom.
- Fixed the notification of changes in the **X**, **Y**, **Width**, and **Height** properties of Screen Groups (*DrawGroup*). *This bug occurred since v0.1.33.*

10.7.2.22 Script Editor

- Fixed a problem with a block of text opening when typing something at the end of the line. *This bug occurred since v2.0.106.*
- After scrolling text in Scripts Editor, lines do not appear duplicated anymore. *This bug occurred since v3.1.128.*
- Fixed a problem when delimiting text blocks when the script contains text with a space at the end. *This bug occurred since v4.6.12.*

10.7.2.23 Studio

- Fixed the behavior of **Elipse E3 Studio**'s status bar to display coordinates and size of an object even when it was not edited by the Screen Editor. *This bug occurred since v0.1.33.*
- Fixed a problem with the **Save** button, which was disabled on certain tabs of Historic, Storage, Formula, Report, and ElipseX objects. *This bug occurred since v3.0.170.*
- Fixed the behavior of check boxes in Scripts Editor when objects are edited by the Organizer after moving the focus from **Elipse E3 Studio**. *This bug occurred since v3.2.121.*
- Differentiated **Elipse E3** and **Elipse Power** products so that customized menus and tool bars from one product are not displayed on the other product. *This bug occurred since v4.6.85.*
- Fixed in Explorer the behavior of icons from projects that do not belong to a Domain. *This bug occurred since v4.5.86.*

10.7.2.24 WebViewer

- Fixed the behavior of Screen object tool tips not displaying in **WebViewer**. *This bug occurred since v4.0.174.*

CHAPTER 11 Version 4.7

This section contains updates of version **4.7** of **Elipse E3**. To check all updates of this version, please refer to the next topics of all Builds or, to check updates of a Build relative to a previous one, please refer to that specific topic.

11.1 Version 4.7 Build 308

This section contains updates of version **4.7.308** of **Elipse E3** relative to version **4.7.307**.

11.1.1 Fixed Bugs

This section contains bugs fixed in version **4.7.308** of **Elipse E3**.

11.1.1.1 ActiveX

- Fixed an unexpected quit that could occur when restoring a **Elipse E3 Viewer** window with MS Forms objects. *This bug occurred since v4.5.119.*

11.1.1.2 Links

- Fixed a GPF that could occur in **E3 Server** when disconnecting a client (**Elipse E3 Viewer** or Remote Domain). *This bug occurred since v3.0.201.*

11.1.1.3 Viewer

- Fixed an unexpected quit that could occur when restoring a **Elipse E3 Viewer** window with MS Forms objects. *This bug occurred since v1.20.221.*

11.2 Version 4.7 Build 307

This section contains updates of version **4.7.307** of **Elipse E3** relative to version **4.7.305**.

11.2.1 New Features

This section contains new implementations in version **4.7.307** of **Elipse E3**.

11.2.1.1 Viewer

- When the **DisableTaskSwitching** property is active, users cannot switch tasks using the keyboard shortcut CTRL + ALT + TAB. Likewise, the options to turn the computer off or switching users are not available on the logon screen either when using the keyboard shortcut CTRL + ALT + DELETE.

11.2.2 Fixed Bugs

This section contains bugs fixed in version **4.7.307** of **Elipse E3**.

11.2.2.1 Viewer

- The **Disable task switching** option on **Elipse E3 Viewer** does not remove the option to shut the computer off. *This bug occurred since v1.18.138.*

11.3 Version 4.7 Build 305

This section contains updates of version **4.7.305** of **Elipse E3** relative to version **4.7.300**.

11.3.1 Fixed Bugs

This section contains bugs fixed in version **4.7.305** of **Elipse E3**.

11.3.1.1 Alarm Server and Alarm Configuration

- Now unbound alarms generate events only in signatures and in **E3 Server**'s alarm summary, not as a database record anymore. *This bug occurred since v4.7.239.*

11.3.1.2 Links

- Fixed sending large amounts of notifications about value changes (more than 8192) to **Elipse E3 Viewer** and to Remote Domains, which may slow them down. *This bug occurred since v2.5.64.*

11.3.1.3 Users

- Fixed the Users window to avoid revealing the saved password when editing a user. *This bug occurred since v1.19.138.*

11.4 Version 4.7 Build 300

This section contains updates of version **4.7.300** of **Elipse E3** relative to version **4.7.234**.

11.4.1 New Features

This section contains new implementations in version **4.7.300** of **Elipse E3**.

11.4.1.1 Documentation

- Updated CPU requirements on **Elipse E3 Installation Guide**.

11.4.1.2 E3Alarm

- Added options to acknowledge and delete unbounded alarms, as well as identifying them in E3Alarm by the **Unbound** column.

11.4.1.3 Installation

- Changed the digital signature of **Elipse E3** files and installers to use a SHA-2 certificate.

11.4.1.4 OPC UA Driver and OPC UA Client

- Updated OPC UA ANSI C Stack to version 1.02 Build 336 Official.

11.4.1.5 Other Implementations

- Created a Line Printer object, which allows printing directly to dot-matrix printers.

11.4.1.6 Protection Device

- Updated the installer of HASP drivers (haspdinst) to version 7.41.

11.4.1.7 Studio

- Created the **ListFiles** method in Studio's Application object.

11.4.2 Fixed Bugs

This section contains bugs fixed in version **4.7.300** of **Elipse E3**.

11.4.2.1 Alarm Server and Alarm Configuration

- Fixed the behavior of alarm counters on Areas, when there are sources with a single Sub-condition of type **Event**. *This bug occurred since v4.0.36.*
- Fixed the display of User Fields from Remote Domains in AppBrowser. *This bug occurred since v4.5.114.*

11.4.2.2 AppBrowser

- Queries now appear on AppBrowser with all methods and properties when selected by E3Chart's **Queries** collection. *This bug occurred since v2.0.62.*

11.4.2.3 Domain, E3 Server, and Hot-Standby

- Fixed the update mechanism of project files to re-execute unloaded objects at run time, when a project file is updated.
- Fixed a problem in Hot-Standby when two servers receive the **Activate** command at the same time. *This bug occurred since v1.20.450.*

- Fixed the behavior of **Elipse E3 Studio**'s application wizard that could create a new Domain even when a Domain is already executing, without checking stopping permissions. *This bug occurred since v1.19.87.*
- Fixed the Domain update to correctly handle cases where several project or library files are updated on the same step and false name conflicts could be detected among new and old versions of these files. *This bug occurred since v1.18.155.*

11.4.2.4 E3Alarm

- The **Enabled** column is not selected by default in E3Alarm anymore. *This bug occurred since v1.0.0.*

11.4.2.5 E3Chart

- Fixed the **ResetConfig** method to restart all E3Chart properties, including Axes and Legends. *This bug occurred since v1.19.191.*

11.4.2.6 E3DataAccess Library

- Improved **E3DataAccess Library** performance when using only asynchronous accesses (**ReadValue**, **WriteValue**, **GetValue**, or **SetValue** without **RegisterCallback**). This also prevents a memory leak in **E3 Server**. *This bug occurred since v4.5.92.*

11.4.2.7 ElipseX Libraries

- Now **Elipse E3 Studio** prevents a child object and a Property when defining an ElipseX from having the same name (this name is auto-incremented).

11.4.2.8 Interface

- Fixed the behavior of Link's configuration mini-dialogs to correctly follow Link's position and be closed when the Link is not visible. *This bug occurred since v1.21.54.*
- Fixed the repositioning of Link's mini-dialogs on **Windows 8** or later.

11.4.2.9 Links

- Fixed the behavior of Table Link's rows, which did not update Links at run time when modified by script. *This bug occurred since v2.5.41.*

11.4.2.10 SetPoint

- Fixed the behavior of SetPoint object's editor to follow object's rectangle, when it is moved with the edition window open.

11.4.2.11 Studio

- Fixed the closing of **Elipse E3 Viewer**, when it is already disconnected from a server.
- Fixed the mechanism of the button to stop or execute **Elipse E3 Viewer** in **Elipse E3 Studio**, so that it does not lock if used very quickly. *This bug occurred since v1.19.100.*
- Fixed the behavior of Link's configuration mini-dialogs to correctly follow Link's position and be closed when the Link is not visible.

11.4.2.12 WebViewer

- Changed the parent window of Report's views, so that they do not close without **Elipse E3 Viewer** being closed. *This bug occurred since v1.19.87.*

11.5 Version 4.7 Build 234

This section contains updates of version **4.7.234** of **Elipse E3** relative to version **4.6.162**.

11.5.1 New Features

This section contains new implementations in version **4.7.234** of **Elipse E3**.

11.5.1.1 Alarm Server and Alarm Configuration

- Created the Alarm Filter object.
- Implemented the **Events** property, which returns a collection of active events on an E3Alarm and on an Alarm Filter.

11.5.1.2 Documentation

- Added a minimum version to use **WebViewer** on Internet Explorer on **Elipse E3 Installation Guide**.
- Updated the **Elipse E3 Installation Guide** with the correct procedures to configure IIS (*Internet Information Services*) on **Windows Server 2003**, **Windows XP**, **Windows Vista**, **Windows 7**, **Windows 8**, and **Windows 8.1**.
- Added support to **Windows 10** on **Elipse E3** documentation.
- Removed the citation to **FillStyle** property on the description of Picture's **BackgroundStyle** property on **Elipse E3 Reference and Scripts Manual**.
- Updated texts and figures on **Elipse E3 Minicourse Tutorial**.
- Added notes on topics about Rotation and Animation of **Elipse E3 User's Manual** about the impossibility of rotating and animating bitmaps.
- Updated the text about Storage's data compression on **Elipse E3 User's Manual** to remove the reference to percentages.
- Added note on **Elipse E3 User's Manual** about average calculation on Pen's data of an E3Chart, on the **E3Chart - Settings - Pens Tab** topic.
- Added information on **Elipse E3 User's Manual** about the behavior of the **E3TimeStamp** field of a Historic when linking it to an existing table on a data base.

11.5.1.3 E3 Admin
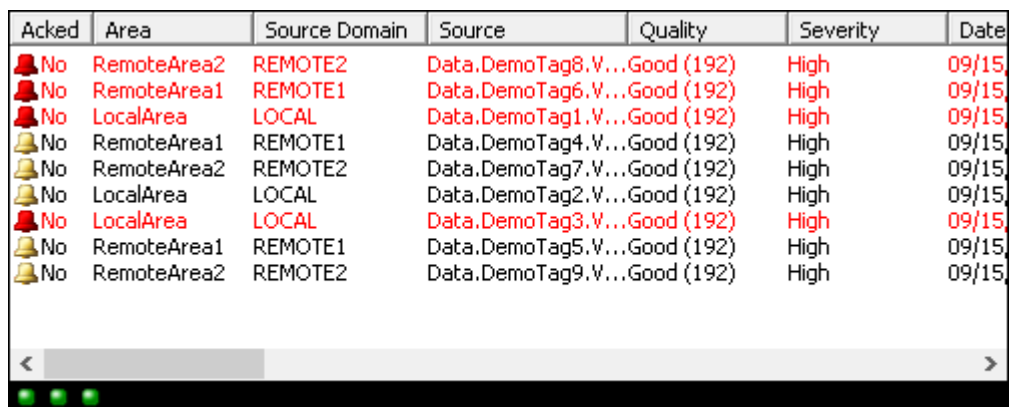
- Changed **E3 Admin**'s Drivers window to allow sorting and filtering by columns.

11.5.1.4 E3 Tweak

- Added to **E3 Tweak** configurations related to new log keys of **E3PowerEngine**: **FullPower.DistLoadModel**, **FullPower.ExternalReader**, **FullPower.SelfHealing**, **FullPower.StateEstimator**, **FullPower.Workspace**, **PowerEngine.DistLoadModel**, **PowerEngine.ExternalReader**, **PowerEngine.PowerFlow**, **PowerEngine.SelfHealing**, **PowerEngine.StateEstimator**, **PowerEngine.TopologyProcessor**, and **PowerEngine.Workspace**.

11.5.1.5 E3Alarm

- Changed E3Alarm's default font, from **MS Sans Serif** to **Tahoma**, with 12.75 points.
- Added a feature to E3Alarm and Alarm Filter objects to receive and aggregate local alarms and alarms from Remote Domains.

Acked	Area	Source Domain	Source	Quality	Severity	Date
No	RemoteArea2	REMOTE2	Data.DemoTag8.V...Good (192)	High	09/15,
No	RemoteArea1	REMOTE1	Data.DemoTag6.V...Good (192)	High	09/15,
No	LocalArea	LOCAL	Data.DemoTag1.V...Good (192)	High	09/15,
No	RemoteArea1	REMOTE1	Data.DemoTag4.V...Good (192)	High	09/15,
No	RemoteArea2	REMOTE2	Data.DemoTag7.V...Good (192)	High	09/15,
No	LocalArea	LOCAL	Data.DemoTag2.V...Good (192)	High	09/15,
No	LocalArea	LOCAL	Data.DemoTag3.V...Good (192)	High	09/15,
No	RemoteArea1	REMOTE1	Data.DemoTag5.V...Good (192)	High	09/15,
No	RemoteArea2	REMOTE2	Data.DemoTag9.V...Good (192)	High	09/15,

RemoteConnection2: Connected

E3Alarm with the new connections status bar

11.5.1.6 Installation

- Integrated eeLogs version 4.5.120.

11.5.1.7 Interface

- Improved descriptions that appear on Properties List for the **DBServer**, **TableName**, **EnableDiscard**, **DiscardInterval**, **DiscartTimeUnit**, **VerificationInterval**, **VerificationUnit**, **EnableBackupTable**, **CacheSize**, **BackupDiscardInterval**, and **BackupDiscardTimeUnit** properties of Storage, Historic, Alarm Server, and Formula objects.
- Implemented the **RGB** formatting on editing fields for selecting a color.

11.5.1.8 OPC Server

- Added Full logs to **Elipse E3**'s OPC server services.

11.5.1.9 OPC UA Driver and OPC UA Client

- Updated the **OpenSSL** library, used on **Elipse E3**'s OPC UA Client, to version 1.0.1p (1.0.1.16).

11.5.1.10 Other Implementations

- Updated the compression library of REC protocol (**zlib** library version 1.2.8).
- Changed **Elipse E3** to use, if possible, the computer's long DNS name. When this is not possible, it keeps using the NetBIOS name, which is limited to 15 characters.

11.5.1.11 Protection Device

- Updated the installer of HASP drivers (haspdinst) to version 7.40.
- A protection device now defines a range of versions of **Elipse E3** that can be executed. Programming this version range is mandatory for Runtime licenses and optional for **Elipse E3 Studio** licenses.

11.5.1.12 Reports

- Added four new parameters to Report's **PrintPreview** method to allow specifying, optionally, position and size of its Preview window. The **Print Report** Pick was updated to support these new parameters.
- Updated the Report object (*ActiveReports Professional 2*) to version 2.5 build 1322.

11.5.1.13 Screen Objects

- Added support to images in **PNG** and **TIFF** format on the DrawString object and also as a background image for Screens.
- Created the possibility of inserting Viewer Folders and Data Server Tags (Demo, Internal, Timer, and Counter Tags) on Screens. Users can also insert Queries on Viewer and on Viewer Folders.

11.5.1.14 Scripts

- Created the **GetScreen** method on Viewer and **ShowScreen** on Splitter to open Screens modified at run time.

11.5.1.15 Studio

- Added the **Yes (all)** and **No (all)** options on commands for closing and saving objects, folders, projects, and libraries on Organizer and Explorer.
- Updated the properties window of Storage, Historic, and Alarm Server objects.

11.5.2 Fixed Bugs

This section contains bugs fixed in version **4.7.234** of **Elipse E3**.

11.5.2.1 Alarms

- Fixed a memory leak on an Alarm Server with event recording to a database turned off and implemented support to alarm statistics with alarm event recording to a database turned off. *This bug occurred since v0.1.26.*
- Fixed the drawing of **Analog** tab of Analog Alarms. *This bug occurred since v4.0.33.*

11.5.2.2 AppBrowser

- Now, when pasting script expressions, AppBrowser adds brackets to the names of ElipseX classes, if needed. *This bug occurred since v3.5.44.*

- Fixed the presentation of the Field Collection of E3Browser (the **Fields** property) on AppBrowser.

11.5.2.3 Demonstration Application

- Fixed a name conflict with XObject **xoKPICalc** on **Elipse E3** Demonstration Application. *This bug occurred since v4.5.15.*

11.5.2.4 Documentation

- Added a note on the description of **KeyUp**, **KeyDown** (Screens and Screen Objects), and **KeyPress** (Microsoft Forms, E3Alarm, and E3Browser) events on **Elipse E3 Reference and Scripts Manual** with a link for a full list of key codes available for these events. *This bug occurred since v1.20.385.*
- Updated the description of the **Font** property of Check Box, Option Button, Combo Box, Command Button, Label, List Box, Toggle Button, and Text Box objects of MS Forms on **Elipse E3 Reference and Scripts Manual** to remove the indication that this property cannot be used by script.
- Fixed the description of the **Remove** method of E3Chart's Collection of Pens on **Elipse E3 Reference and Scripts Manual** to indicate that this method accepts a Pen's index as well as a Pen's name to remove. *This bug occurred since v3.2.267.*
- Removed the example on the description of Splitter's **SplitLink** property on **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v2.5.177.*
- Updated the description of Splitter's **SplitValue** property on **Elipse E3 Reference and Scripts Manual** to include its behavior also at run time. *This bug occurred since v3.0.168.*
- Updated the **Properties tab** figure on topic **Programming in Elipse E3 - Getting References to Objects - Accessing Objects from the ElipseX Itself** of **Elipse E3 Reference and Scripts Manual** to match it to topic's text. *This bug occurred since v1.22.34.*
- Updated the description of Viewer's **EnableInactivity** property on **Elipse E3 Reference and Scripts Manual** to indicate that this property cannot be changed by script. *This bug occurred since v1.20.325.*
- Updated the example of Viewer's **GetFrame** method on **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v1.0.0.*
- Fixed the name of the field that allows filtering an alarm by area on the description of E3Alarm's **CustomFilter** property on **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v4.5.134.*
- Added information about discrete alarm sources on the description of Event's **ConditionName**, **EventCategory**, and **SubConditionName** properties on **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v4.0.192.*
- Added more information to the description of the **Value used for scan** option on topic **E3Chart - Settings - Pens Tab**, table **Available options for Connection Type tab** on **Elipse E3 User's ManualElipse E3 User's Manual**. *This bug occurred since v3.5.172.*
- Updated topic **Frequently Asked Questions - Remote Domains** on **Elipse E3 User's Manual** to describe the procedure to view and acknowledge alarms in Remote Domains. *This bug occurred since v3.1.234.*
- Updated the description of the **Keep data from the last ... <Backup Table>** option of Storage, Historic, and Alarm Server objects on **Elipse E3 User's Manual**. *This bug occurred since v1.21.113.*

11.5.2.5 Domain, E3 Server, and Hot-Standby

- Fixed a problem when starting a Domain by a server and stopping it by another, where this Domain could start again by itself. *This bug occurred since v1.18.43.*
- Improved performance when updating server objects that contain I/O Drivers and fixed the update mechanism of XObjects for Domains in execution. *This bug occurred since v1.19.281.*
- When renaming objects using **Elipse E3 Studio** and applying those changes, now objects are deactivated and then reactivated. *This bug occurred since v1.18.79.*
- **E3 Server** now releases Domain's directory after being stopped. *This bug occurred since v2.5.46.*
- Fixed a memory leak that occurred in **E3 Server** at each opening of a Domain. *This bug occurred since v1.18.43.*

11.5.2.6 Drivers and I/O Server

- Removed repeated log messages about a watchdog time-out for I/O Server and **E3DBEngine**. *This bug occurred since v4.6.79.*

11.5.2.7 E3 Admin

- Changed acronyms for seconds and milliseconds from "sec" and "msec" to "s" and "ms", respectively. *This bug occurred since v1.18.109.*

11.5.2.8 E3Chart

- Fixed E3Chart behavior when Queries are removed using the **DeleteObject** method, instead of using the **Remove** method of the collection of Queries. *This bug occurred since v1.20.450.*

11.5.2.9 ElipseX Libraries

- Fixed Link behavior with **Object**-type properties on ElipseX libraries when deactivating these objects. *This bug occurred since v1.18.155.*

11.5.2.10 Find and Replace

- Fixed the behavior of Find and Replace tool in cases when the context object is removed. *This bug occurred since v2.0.95.*

11.5.2.11 Installation

- Fixed installers for **Elipse E3** 64-bit version to include the correct version of file E3Downloader.cab. *This bug occurred since v4.6.97.*

11.5.2.12 Interface

- Vertically aligned the text relative to non-availability of **Windows XP** style on the options of **Customize** window of **Elipse E3 Studio**.
- Standardized fonts for **Elipse E3** windows to **Tahoma**. *This bug occurred since v3.0.79.*
- Added a period to the phrase referring to the configuration of restrictions by **Absolute Limit** on Formula's restriction configuration. *This bug occurred since v1.18.147.*
- The horizontal line of the **Classes of objects** window of advanced export options for objects now follows this window's width. *This bug occurred since v3.2.46.*
- Fixed the margin for controls on **Frame** tab of properties of Frameset objects. *This bug occurred since v0.1.33.*
- Fixed a problem on Tag Browser window, in which the text box could be misaligned when resizing it. *This bug occurred since v4.0.60.*
- Fixed problems with truncated texts on **Elipse E3**.
- Fixed the size of fonts on **Yes**, **No**, **Yes (All)**, and **No (All)** windows of **Elipse E3**. *This bug occurred since v4.5.61.*
- Fixed the size of texts in **Elipse E3 Studio**'s opening windows when using a DPI (*Dots Per Inch*) above 96. *This bug occurred since v2.5.126.*
- Fixed several translation problems on **Elipse E3**.
- Fixed in **E3 Tweak** the translation of texts of type "Module 'XXX'" to "'XXX' Module". *This bug occurred since v4.6.77.*
- Fixed the enabling of controls on **Configuration** tab of the Alarm Server in **Elipse E3 Studio**, where options could appear enabled in cases where these options have no effect. *This bug occurred since v1.20.235.*

11.5.2.13 Links

- Fixed a problem with names considered for copied or renamed objects remained different for their real name, for Link purposes. *This bug occurred since v1.0.16.*

11.5.2.14 OPC Client

- Changed the mechanism for **Elipse E3**'s OPC Client to allow executing it on an account different from **SYSTEM** on **Windows Vista** or later. *This bug occurred since v4.6.73.*

11.5.2.15 OPC UA Driver and OPC UA Client

- Fixed the handling of URLs on **Elipse E3**'s UA client, where the scheme part was accepting only "opc.tcp" (lowercase). *This bug occurred since v4.5.160.*

11.5.2.16 Other Corrections

- Blocked the usage of control characters (ASCII codes between 0 and 31 and the code 127) in names of objects on **Elipse E3**. *This bug occurred since v1.18.147.*
- In **Elipse E3 Studio**, when pasting a text on a grid cell, now this text is truncated up to the first line break. *This bug occurred since v1.18.54.*

- Fixed the reading of the version of a project file changed since its last opening. *This bug occurred since v1.21.111.*

11.5.2.17 Protection Device

- Fixed an expiration warning that could erroneously appear for each **E3 Admin** opened after a reprogramming that changed the expiration date of a license. *This bug occurred since v4.0.91.*

11.5.2.18 Query

- Fixed the assembling of the **WHERE** clause of Queries when using **Text**-type values on Microsoft SQL Server. *This bug occurred since v3.2.52.*
- Fixed occasional Query locks regardless of the database used (Access, SQL Server, or Oracle). *This bug occurred since v4.5.198.*

11.5.2.19 Scripts

- Fixed a GPF when removing child objects from an object when there is a **For Each** loop traversing these child objects.

11.5.2.20 Scripts Editor

- Implemented on Scripts Editor support for Picks and scripts, which used to appear only on scripts documentation or on the **Find and Replace** window. *This bug occurred since v1.18.155.*

11.5.2.21 Studio

- Fixed a GPF when users change the focus for an item that contains a Table or Multiple Link edits an event using the **Edit Links** window. *This bug occurred since v2.0.116.*
- Removed duplicated messages when trying to configure invalid names (for example, **Null**) for objects on **Elipse E3**. *This bug occurred since v1.19.203.*
- Removed the menu that displays the **Object Counting** option when mouse click happens on an empty area of Organizer. *This bug occurred since v4.6.42.*
- Changed the icon of progress windows of **Elipse E3 Studio** from exclamation point (!) to information (i). *This bug occurred since v1.18.145.*
- Fixed performance problems in **Elipse E3 Studio** when opening applications with many project files. *This bug occurred since v4.5.86.*
- Fixed the recording on Windows Registry by **Elipse E3 Studio** for the **Directories** key, which registers the folder of the last Domain or file opened. *This bug occurred since v4.5.18.*
- Now **Elipse E3 Studio** records the last directory where an image was selected, so that this folder is suggested for a new image. *This bug occurred since v3.0.227.*
- Fixed a drawing problem on **Elipse E3** edition windows, where the icon ⊟ could not appear when deleting and adding child items in objects. *This bug occurred since v1.18.147.*

11.5.2.22 Viewer

- Fixed an error on memory cache of **Elipse E3 Viewer** Screens, which could keep a Screen with a wrong version. *This bug occurred since v1.18.79.*
- Changed the cache of **Elipse E3 Viewer** Screens to always normalize all received paths, thus preventing the download of the same file more than once. *This bug occurred since v1.18.54.*
- Changed the download of **Elipse E3 Viewer** files to validate their type on Server and on **Elipse E3 Viewer**. This affects opening Screens or Frames, using the **OpenScreen** method, and opening Reports, using the **LoadReport** method. *This bug occurred since v1.18.54.*

CHAPTER 12

Version 4.6

This section contains updates of version **4.6** of **Elipse E3**. Please check the next topics for more information about **new features** and **fixed bugs** in this version.

12.1 New Features

This section contains new implementations in version **4.6** of **Elipse E3**.

12.1.1 ActiveX

- **Elipse E3** now also considers Windows Registry to determine whether an object is an ActiveX or not (the **HKEY_CLASSES_ROOT\CLSID\{classId}\Control** key), which makes it much more easier to use ActiveXs generated in .NET.

12.1.2 Documentation

- Updated installation requirements of **Elipse E3**, relative to supported operating systems, throughout the documentation.Updated information on **Elipse E3 User's Manual** about E3Playback in **Demo** mode and the playback's assembling process.
- Added a note on **Elipse E3 User's Manual** about the impossibility of using Reports on 64-bit versions.

12.1.3 Domain, E3 Server, and Hot-Standby

- A new process was created, E3DBEngine.exe, which replaces **E3Run** for the execution of all accesses to databases.
- Removed the **EnableLocalCreation** property of the Database Server. **Elipse E3 Viewers** cannot access databases directly anymore, and all accesses are performed via server.

12.1.4 E3 Admin

- Now Statistics and Licenses windows of **E3 Admin** differentiate when an **Elipse Power Studio** or **Elipse E3 Studio** is connected to an **E3 Server**.

12.1.5 E3 Tweak

- Updated **E3 Tweak** to include new **Full** log keys.

12.1.6 E3DataAccess Library

- Implemented the recycling of links in the **WriteValue** and **ReadValue** methods of E3DataAccessManager.

12.1.7 EPM

- Implemented asynchronous readings and writings in E3AccessLayer.

12.1.8 Expressions

- Changed the timestamp rules of **Elipse E3** expressions to consider the timestamp of constants only if there is no variables in an expression. For expressions that contain variables, the timestamp still is the newest.

12.1.9 Installation

- The file !register.bat now can be executed with elevated rights via Windows Explorer.
- Integrated eeLogs version 4.5.91.
- Installers Full on 64-bit versions now also include 32-bit **Elipse E3 Studio**.

12.1.10 Links

- Created an option for Multiple Links to keep all their Links always in **Advise** mode (active).

12.1.11 OPC Client

- Implemented sorting of server identifiers on the window to select OPC servers.
- Now **Elipse E3** OPC client executes in a separated process. Two new properties were created and implemented time-outs independent of Windows DCOM, thus avoiding locks in any OPC client operation.
- Added to **E3 Tweak** configurations relative to log keys of OPC Client.
- Created detailed logs of communication of **Elipse E3** OPC clients. Logs are registered in file IOData, on section **OpcClient**.

12.1.12 Other Implementations

- Added texts identifying the 64-bit versions on several locations of **Elipse E3**: **Elipse E3 Studio**'s title bar, on About Elipse E3 Studio and About E3 Admin windows, on logs of process statistics, and in the product's name on file details.

12.1.13 Protection Device

- Updated the installer of HASP drivers (haspdinst) to version 6.63.

12.1.14 Remote Domains

- Implemented a time limit of synchronous requests to Remote Domain servers.

12.1.15 Reports

- Implemented in **Elipse E3** support to identify and inform classes of objects without support on 64-bit versions. Among them there are Reports and occasionally any ActiveX used in the application.
- Improved support for using the keyboard on Domain's or objects' error window.

12.1.16 Storage

- Storage licenses are now counted by the amount of active Storage fields in the application, and not by the amount of fields in the database.

12.1.17 Studio

- Implemented a tool to count objects in **Elipse E3 Studio**.

Object Counting

- The Properties List of **Elipse E3 Studio** now allows grouping properties by categories, and also allows applying filters.
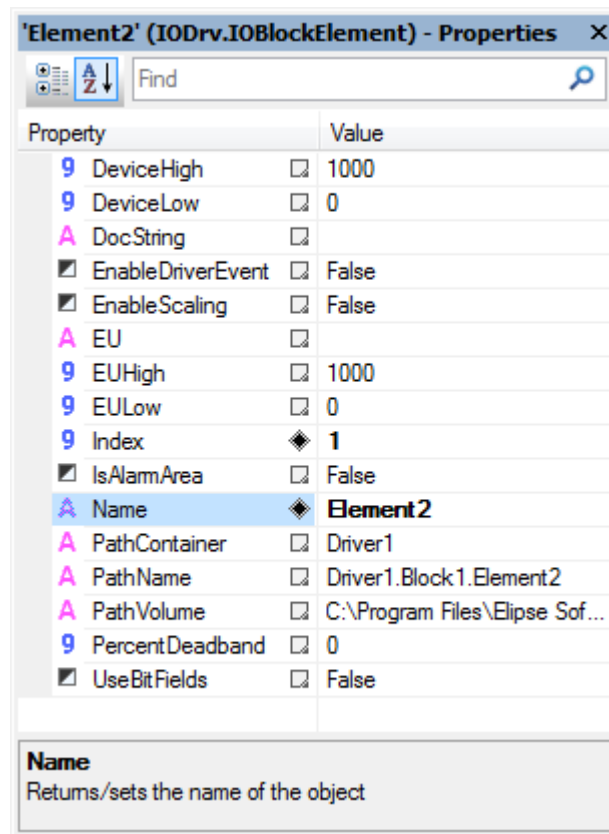
Properties List in alphabetical mode
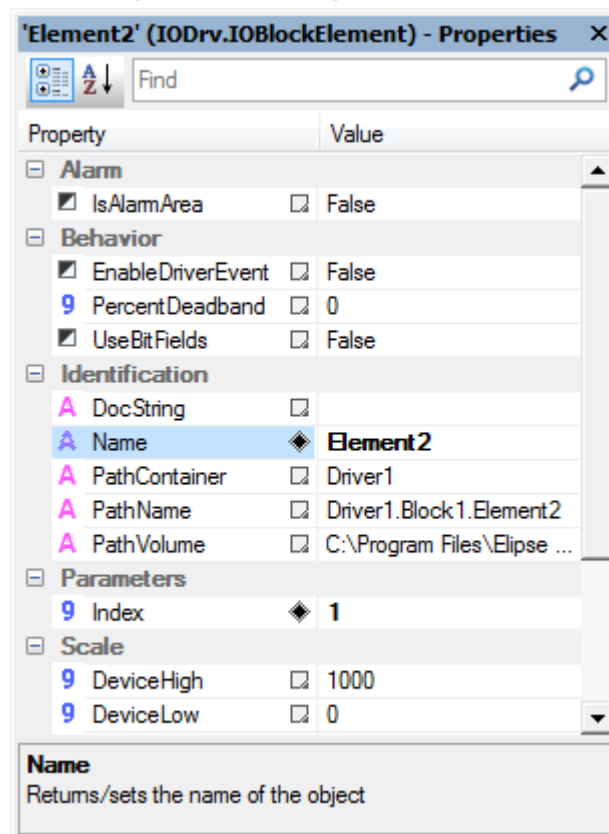
Properties List in category mode

- Implemented access to Driver DLLs at design time outside **Elipse E3 Studio** (via I/O Server process), allowing its usage on 64-bit versions of **Elipse E3 Studio**.

12.2 Fixed Bugs

This section contains bugs fixed in version **4.6** of **Elipse E3**.

12.2.1 Alarm Server and Alarm Configuration

- Fixed a memory leak that occurred in a **Elipse E3 Viewer** or in an **E3 Server** receiving alarm events. *This bug occurred since v3.1.128.*

12.2.2 Database

- Fixed the processing of operation queues of **Elipse E3** databases that may generate files .e3o# (.e3o0, .e3o1, .e3o2, etc.) on Domain's folder when processing operations marked as **ImmediateExecute**. *This bug occurred since v3.0.36.*
- The **ConnectionActive** and **TotalFailedWrites** of a Database Server object now work correctly when used in Links.*This bug occurred since v1.21.77.*
- **Elipse E3 Studio** now creates correctly on a folder relative to the current Domain the files .mdb declared with relative paths. *This bug occurred since v0.1.24.*
- **Elipse E3 Studio** now applies immediately all changes performed in advanced properties of a Database, such as connection's network library with a SQL Server database. *This bug occurred since v1.18.16.*
- Fixed a possible lock that may occur in **E3Run** when creating a synchronous query to a database. *This bug occurred since v3.1.170.*
- Fixed an Oracle session leak that occurred whenever a connection was finished due to a command time-out. *This bug occurred since v4.0.14.*
- Fixed a problem in Oracle databases which may fail database operations if synchronous operations were executed, such as accessing Formulas or accessing the **E3Query.Execute(True)** method while consuming files .e3i or .e3o (error **ORA-03127**). *This bug occurred since v4.0.14.*

12.2.3 Documentation

- Updated links for KB articles on topic about Formula's **SetValueData** method on **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v3.5.76.*
- Fixed the measurement unit on the description of the **Width** property of E3Browser's Field object on **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v3.1.128.*
- Added a table with time units to the description of the **GetRealTimePeriod** method of an E3Chart's Axis on **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v2.0.29.*

12.2.4 Domain, E3 Server, and Hot-Standby

- Changed **E3 Admin** to detect when UAC (*User Account Control*) is turned off and to fail only if there is a need to elevate user privileges. *This bug occurred since v3.0.348.*
- Fixed a GPF that occurred when attributing an object to the **Value** property of a Block Element with an enabled scale (the **EnableScaling** property). *This bug occurred since v0.1.7.*
- Implemented an immediate release of Driver licenses when finishing the **E3Run** process, thus avoiding a lack of Driver licenses if the Domain is restarted very fast after an **E3Run** failure. *This bug occurred since v3.0.200.*

12.2.5 Drivers and I/O Server

- Implemented a protection against using activation and deactivation of objects via scripts (the **Activate** and **Deactivate** methods) while there is an ongoing activation or deactivation operation. *This bug occurred since v2.5.194.*

12.2.6 E3Alarm

- Fixed a problem where an E3Alarm lost its User Field configuration when connected to an Alarm Server in a Remote Domain, displaying the value "#WRONG INDEX#" on some columns.

12.2.7 E3Browser

- Fixed a GPF that may occur in **Elipse E3 Viewer** when performing several queries in a row in an E3Browser object with a database configured with the **EnableLocalCreation** property set to True. The object may also get empty or display a message "DB disconnected". *This bug occurred since v2.5.86.*
- Changed queries in **Elipse E3** to always use brackets when delimiting field names, thus avoiding problems in queries with Oracle databases, which previously used quotation marks. *This bug occurred since v2.0.30.*

12.2.8 E3Chart

- Fixed a failure on the connection of a chart line between historical and real-time data, in a Storage database. *This bug occurred since v3.2.70.*
- Fixed a problem in E3Chart that may lock and display a message "Loading" if the database has its **EnableLocalCreation** property set to True. *This bug occurred since v1.22.71.*
- Fixed the automatic query of E3Chart Pens when executed in the server. *This bug occurred since v1.21.100.*
- Fixed a problem when removing queries by script, where Pens referencing another query had their **QueryName** property emptied. *This bug occurred since v4.5.107.*
- Fixed the text color of E3Chart's legend header. *This bug occurred since v4.0.206.*
- Improved automatic formatting of dates in E3Chart, to comply with customized Windows formats. *This bug occurred since v1.20.367.*

12.2.9 ElipseX Libraries

- Fixed error **8004FFF7**, which may be displayed without a reason during an update of XObject libraries, with a Domain executing. *This bug occurred since v2.0.141.*
- Fixed the load of default values for properties created after ElipseX instances were already saved. *This bug occurred since v1.18.115.*

12.2.10 Find and Replace

- Fixed a problem on error window of the Find and Replace tool, which displayed empty parentheses when an object load failed. *This bug occurred since v1.20.236.*

12.2.11 Formula

- Fixed a problem that could lead to inserting duplicated records on a database if immediate execution operations interrupted the processing of .e3i or .e3o files. This could occur, for example, when executing in sequence the **CreateValue** and **SetValueData** methods of a Formula object whose **ImmediateExecute** property was configured to False. *This bug occurred since v4.6.95.*

12.2.12 Installation

- Now **Elipse E3** installer provides the file ET32B.dll signed digitally. *This bug occurred since v4.5.10.*
- Now **Elipse E3** installer provides the file ET64B.dll signed digitally. *This bug occurred since v4.0.144.*
- Now the file HKCustomer30.exe is signed digitally. *This bug occurred since v3.0.307.*
- Now the file Interop.XPDLib.dll is signed digitally. *This bug occurred since v3.5.80.*

12.2.13 Interface

- Fixed the abbreviation for seconds on the screen to start, stop, or update the Domain. *This bug occurred since v0.1.26.*

12.2.14 OPC Client

- Changed the window OPC Server Information of OPC Drivers to display server timestamps according to local time. *This bug occurred since v1.0.0.*
- Changed the **Manufacturer** field on window OPC Server Information to display detailed information. *This bug occurred since v1.0.0.*
- Implemented support for reading arrays of **Variant** using OPC DA 1.0a. *This bug occurred since v1.20.406.*
- Now Tags with disabled reading preserve their values even if they loose the connection with an OPC server. *This bug occurred since v1.0.0.*

12.2.15 OPC Server

- Hid from OPC server's browsing the **PathContainer**, **PathVolume**, and **IsAlarmArea** properties. *This bug occurred since v3.0.196.*

12.2.16 Other Corrections

- In **Elipse E3 Studio** now all **Enum**-type properties can have their values removed, if they do not apply to a specific object. In addition, some enum values may appear disabled when they are not supported. *This bug occurred since v1.18.147.*
- Fixed a GPF that occurred when trying to drag and drop an object from one **Elipse E3 Studio** to another. *This bug occurred since v4.5.75.*
- Fixed the reading of Windows Registry keys by **E3 Admin** when UAC (*User Account Control*) is enabled. *This bug occurred since v4.5.18.*
- Objects created at run time in **E3Run** are now automatically reconnected to pre-existing Links. *This bug occurred since v1.18.26.*

12.2.17 Query

- Improved handling of results of asynchronous queries, so that an excess of queries do not lock **Elipse E3 Viewer**'s nor **E3 Server**'s interface. *This bug occurred since v2.0.92.*
- Fixed the display of items in Explorer and in Organizer that may show as unloaded, even when loaded. *This bug occurred since v4.5.142.*

12.2.18 Reports

- Fixed the behavior of Reports loaded in the server, when it was not possible to access server objects via Links. *This bug occurred since v3.0.238.*
- Fixed a memory leak whenever a Report was loaded in a **Elipse E3 Viewer**. *This bug occurred since v4.0.128.*
- Fixed a lock that may occur in the server if an error in a script occurred when generating a Report. *This bug occurred since v1.18.114.*

12.2.19 Screen Objects

- Fixed information in the file ElipseKeyPad.dll to match the real version of **Elipse E3** it belongs. *This bug occurred since v3.1.11.*

12.2.20 Studio

- Fixed a problem of reversing the order of Tags when several Tags were dragged to an upper position. *This bug occurred since v1.0.1.*
- Fixed a leak on GDI objects when performing a drag-and-drop of items inside a view with EcoListCtrl. *This bug occurred since v0.1.26.*
- When closing an active tab, **Elipse E3 Studio** now correctly selects the last tab that was active previously. *This bug occurred since v2.0.39.*
- Fixed a GPF that may occur in **Elipse E3 Studio**, **E3Run**, or **Elipse E3 Viewer** x64 when deleting an object and the process uses memory beyond 4 GB. *This bug occurred since v3.1.10.*
- Improved performance of searching in user fields in **Elipse E3 Studio**, which was extremely slow in large applications. *This bug occurred since v4.5.114.*
- On Screen's layer editor, when using the INS key, the new layers added now have an auto-incremented name. *This bug occurred since v4.5.51.*
- Fixed a security vulnerability (ICS-VU-253665) in **Elipse E3 Studio** and in **E3 Admin**. *This bug occurred since v4.5.232.*

12.2.21 Undo Command

- Fixed the update of the Properties List for several common properties of native Screen objects, when **Undo** or **Redo** operations are executed. *This bug occurred since v1.0.0.*
- Fixed the **Undo** option for the **Effect3D**, **Effect3D_X**, **Effect3D_Y**, **Effect3D_ColorBase**, and **Effect3D_ColorTop** properties of Screen objects. *This bug occurred since v1.0.15.*

12.2.22 Users

- Fixed the update of Viewer's **User** property, which may indicate (via Link) a wrong user when a login failed via the **LoginUser** method. *This bug occurred since v4.0.144.*
- Implemented a check for **Elipse E3 Studio** sessions when closing an executing Domain with stop restrictions. *This bug occurred since v1.20.322.*

12.2.23 Viewer

- Closing an accessory process (**IOServer**, **E3UAClient**, **E3OpcClient**, or **E3DBEngine**) does not cause a disconnection of the **Elipse E3 Viewer** trying to access that process anymore. *This bug occurred since v1.20.192.*

This section contains updates of version **4.5** of **Elipse E3**. Please check the next topics for more information about **new features** and **fixed bugs** in this version.

13.1 New Features

This section contains new implementations in version **4.5** of **Elipse E3**.

13.1.1 Alarm Server and Alarm Configuration

- Alarm Sources now support User Fields.

- Added the **UserFields** property (collection) in Alarm Sources and Areas, allowing to access and configure User Fields via scripts.

- Alarm's or Area's User Fields now can receive a value or a Link.

- The Alarm Server now allows configuring an unlimited number of User Fields.

- The window with fields to store on the Alarm Server is now resizable, has multiple selection, and the list of fields is sorted alphabetically.

- Added buttons to add and remove User Fields on the Alarm Server's property window.

- Added a statistical log to the AlarmHub.

- User Fields now can be configured to actively propagate their values to children Alarm Sources and Alarm Areas. So, when changing the value of an User Field, all alarms inheriting that value are instantly updated.
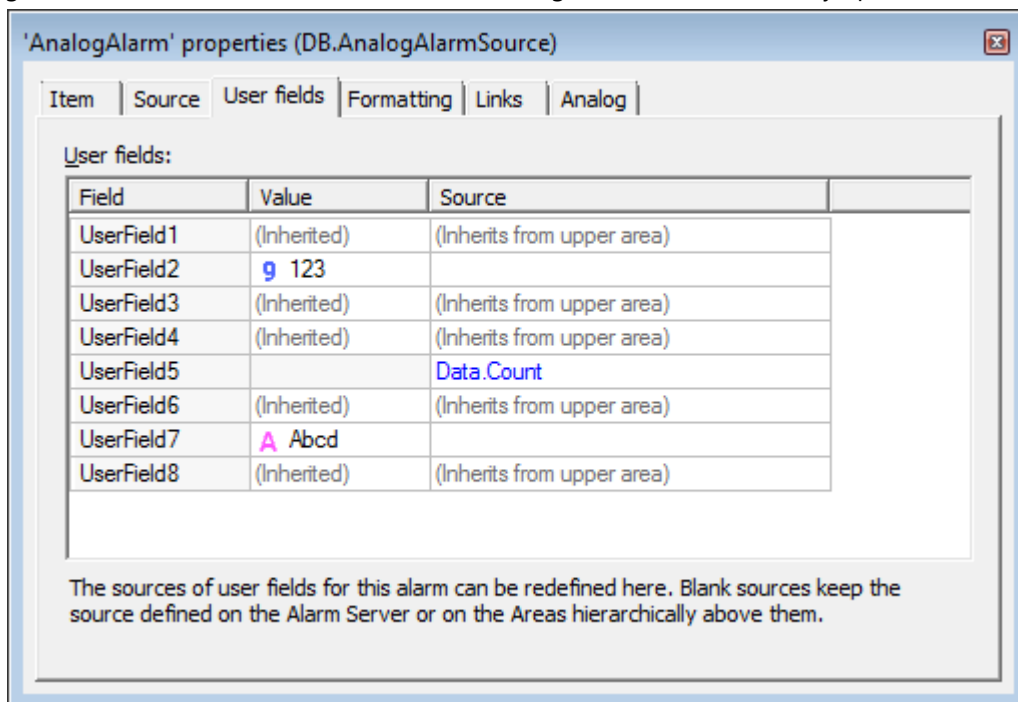
Analog Alarm with new User Fields options

13.1.2 Database

- Now users can edit the SQL Server connection **String**, allowing, for example, connect to a SQL Server with Mirroring enabled.

- Improved server logs to indicate when an object such as the Database Server, Storage, or Alarm Server is searched by **Elipse E3 Viewer** but not found, or it is not the expected type.

- When the load of Oracle client DLL (OCI.DLL) fails, the log registers the environment variable *Path*, to improve diagnosis.

13.1.3 Documentation

- Updated the minimum requirements to install **Elipse E3** and **Elipse E3 Viewer** in **Third-Party Licenses in Elipse E3**.
- Updated the Gold Independent Software Vendor logo, USA branch address, and added a link to KB in the final page of **Elipse E3** documentation in PDF format.
- Updated the Microsoft Partner and OPC Member logos of **Elipse E3** documentation in PDF format.
- Added the OPC Foundation MIT license in the license document of **Elipse E3**.
- Updated the table of fields of a Pen's Legend with information about the number and name of each column, in **Elipse E3 User's Manual**, as well as in **Elipse E3 Reference and Scripts Manual**.
- Updated the description of the **DefaultValue**, **HelpString**, and **Retentive** properties of an ElipseX Property object in **Elipse E3 Reference and Scripts Manual**.
- Updated the description of the **SetDisableTaskSwitching** method of the FrameSet object in **Elipse E3 Reference and Scripts Manual**.
- Updated all models to generate PDFs for A4 printing format in all documents, except the **Third-Party Licenses in Elipse E3**.
- Added a topic about Discrete Alarms in **Elipse E3 Tutorial Developer**.
- The exercise in the **Hot-Standby - Configuring Hot-Standby** chapter of **Elipse E3 User's Manual** was changed to remove the explanation about every configuration option and replace them by links to specific topics in the chapter about Domains.
- Removed the topic **List of Events**, of **Drivers** chapter of **Elipse E3 User's Manual**, which was replaced by the topic **Tags Reported by Events**.
- Added a note in **Elipse E3 User's Manual** explaining the functionality of the **Disable permissions check** on **Elipse E3 Studio**'s **Permissions** tab.
- Added EQATEC Analytics license to **Third-Party Licenses in Elipse E3**.

13.1.4 Domain, E3 Server, and Hot-Standby

- **E3 Server** now supports unlimited E3DataAccess and E3AccessLayer connections, without consuming **Elipse E3 Viewer** licenses or any other type of license.
- **E3DataAccess Library** does not consume a **Elipse E3 Viewer** license anymore when connecting to an **E3 Server**, as long as the **E3 Server** version be 4.5.199 or newer. This type of connection is registered in **E3 Server** as "E3DataAccess".
- E3AccessLayer, used by **EPM** to collect data from **Elipse E3**, does not consume a **Elipse E3 Viewer** license anymore when connecting to an **E3 Server**, as long as the **E3 Server** version be 4.5.199 or newer. This type of connection is registered in **E3 Server** as "E3AccessLayer.EPM".
- **E3 Admin**'s License and Statistics windows now are resizable. They also identify correctly the connections via **E3DataAccess Library** and E3AccessLayer, differentiating them from **Elipse E3 Viewer** connections. The names of the other connections were standardized on both windows. Added a **Program** column on Statistics window.

13.1.5 Drivers and I/O Server

- Implemented the **Pool of IOServer Processes**, which allows several Drivers to run in a single process, allowing applications with hundreds and even thousands of Drivers. This Pool can be configured and enabled in the Domain configuration (the **Properties** tab), and can be controlled in each Driver object using the new **DisableIOServerPool** property.
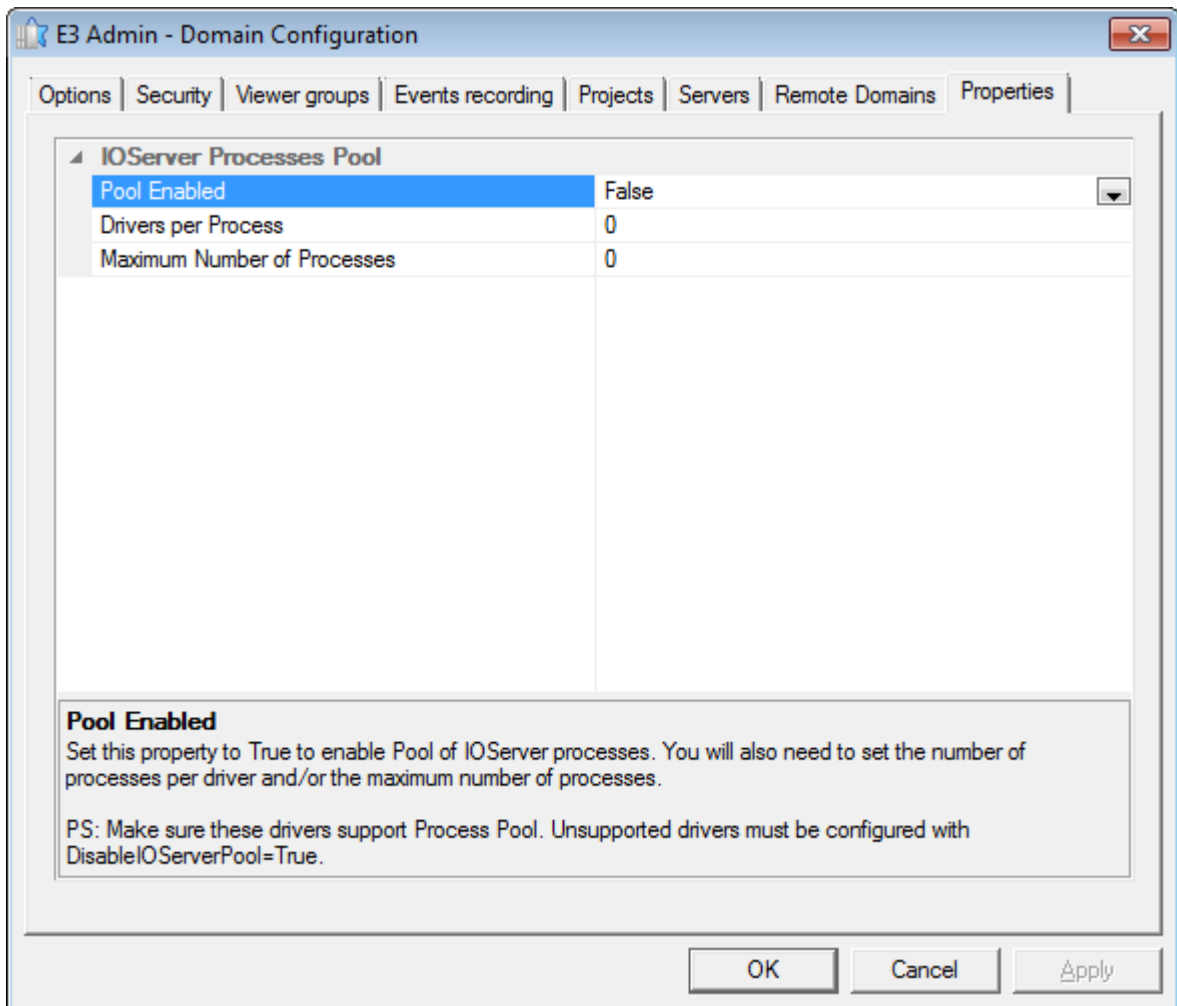
IOServer Process Pool

- Added support to Drivers that implement the **drvCreateDriverInstance** service, which allows several Driver instances to run in the same I/O Server.
- The interval of statistical logs of Driver data processing (**IOQueue**) now can be configured via registry on the **HKLM\Software\Elipse Software\E3\Logs\IOQueueStatsSec** key. Four variables were added to the log: **AvgDelay**, **MaxDelay**, **AvgProcess**, and **MaxProcess**.

13.1.6 E3 Tweak

- Added the **DisableThreadPool** option in **E3 Tweak**.
- Added the **WindowsExceptionCapture** option in **E3 Tweak**.
- Added the **ProcessInfo.E3UaClient** and **Full.UaClient** options in **E3 Tweak**.

13.1.7 E3Alarm

- Added the **CustomFilter** property, which allows editing an expression to filter alarm messages. The **Filter** property was hidden and created the **AreaFilter** property.
- E3Alarm now support four sorting fields. Created four properties to allow configuring the third and fourth sorting level: **ThirdSortField**, **ThirdSortAscending**, **FourthSortField**, and **FourthSortAscending**.
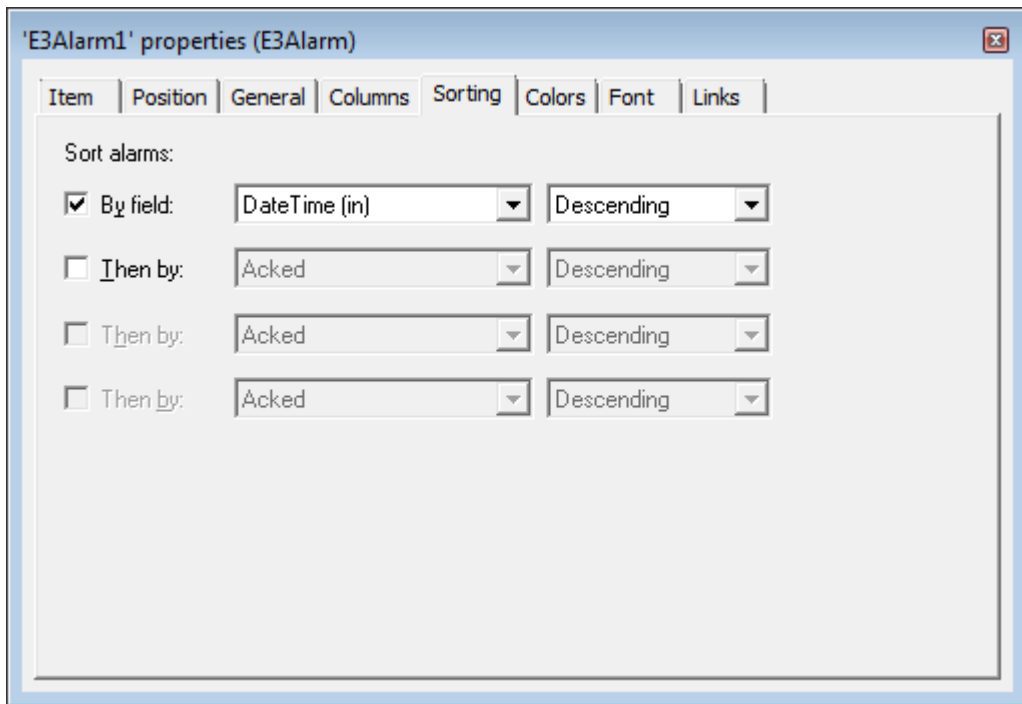
New sorting options in E3Alarm

- Added two properties in E3Alarm, **BorderColor** and **BorderThickness**. These properties configure, respectively, the color and size of E3Alarm's border.

- Added new counters for inactive and non-acknowledged alarms in E3Alarm, Alarm Server, Areas, and objects with the area behavior enabled (*ExtArea*). The new properties added are **InactiveNACKAlarms**, **InactiveHighNACKAlarms**, **InactiveMedNACKAlarms**, and **InactiveLowNACKAlarms**.

- The **Columns** tab on the E3Alarm's property window is now resizable.

- Added a **Banner Mode** option in E3Alarm. This mode displays only the first alarm of the current filter.
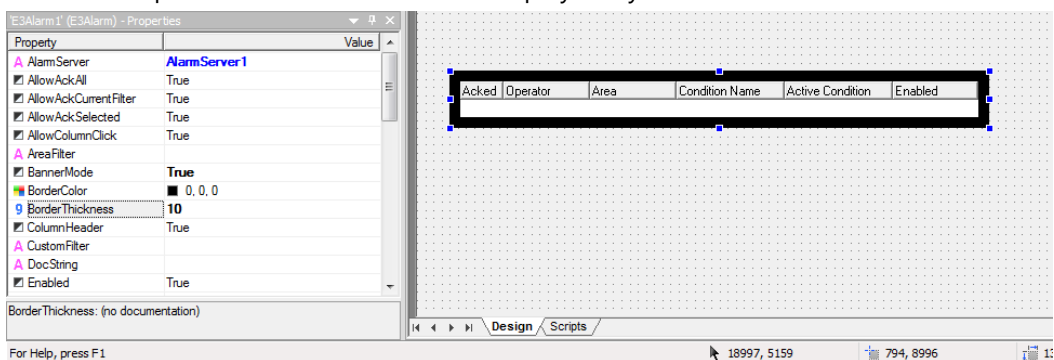
E3Alarm's BannerMode, BorderThickness, and BorderColor properties

13.1.8 E3Chart

- Added the **CursorSearchStyle** property in E3Chart. This property allows the cursor to search for chart points according to the following options: nearest point, interpolated point, and previous point.

- Added the **ClearPenMarks** method in E3Chart, which removes search marks of all Pens.

13.1.9 E3DataAccess Library

- **E3DataAccess Library** no longer depends on the E3Sys library and other **Elipse E3** components, and it can be used in systems with a different version of **Elipse E3** installed.

- Added methods to register and unregister callbacks in batch for items or Tags: **RegisterCallback**, **UnregisterCallback**, and **ClearCallbacks**.

- **E3DataAccess Library** now manages the connection to a server automatically.

13.1.10 ElipseX Libraries

- Now users can indicate if an XControl or XObject property is persistent, that is, whether its value is editable in **Elipse E3 Studio** and stored in every instance (True) or it is a runtime-only value (False), restarted whenever the application starts.

13.1.11 Installation

- Now the **WebViewer** installer detects if there is another **Elipse Software** product already installed, such as **Elipse E3**, **Elipse E3 Viewer**, or **Elipse Power**, and displays a message asking for user confirmation. If the installation is silent, no message is displayed and aborts the installation.

- Updated the **Elipse E3** demonstration application, with new screens and visual improvements. The screens automatically fit to 4:3 or 16:9 proportions, according to the system.

- The log generated during installation is now clearer and objective.

- Added the **ProductVersion** field on **Version** tab of installation file properties.

- Changed the icons of **WebViewer** installer and uninstaller.

- Added support to **Elipse E3** installation on **Windows 8** and **Windows Server 2012**.

- Integrated eeLogs version 4.5.75, which ensures support to **Windows 8** and **Windows Server 2012**, in addition to other corrections and improvements on the management of repository, collecting, and viewing events.
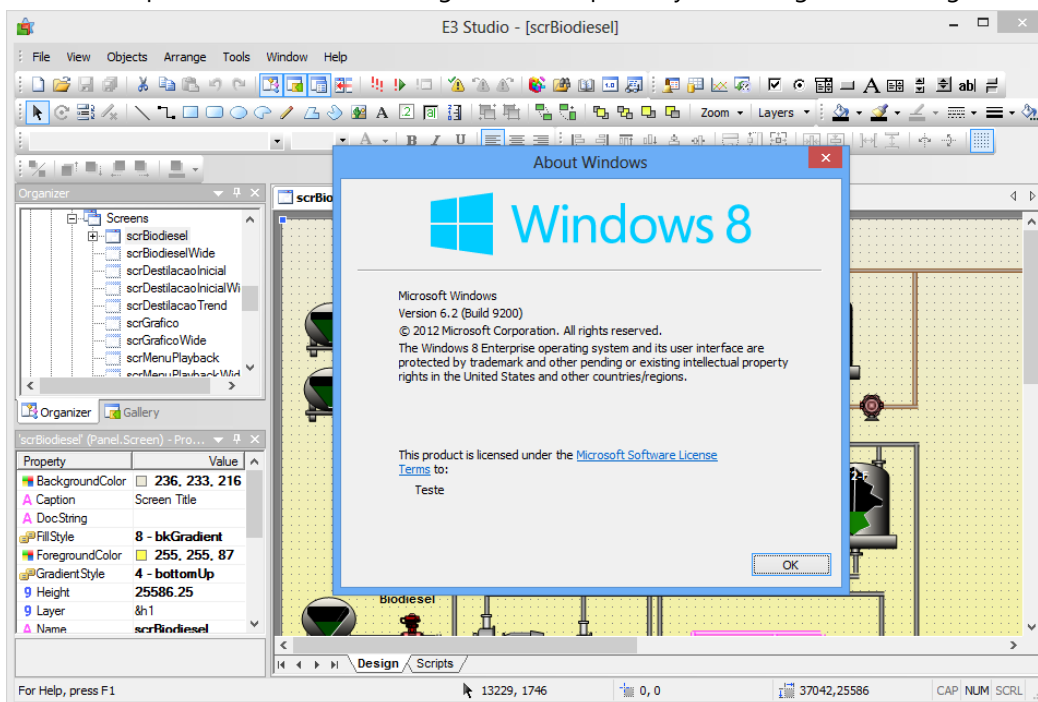
Elipse E3 Studio executing on Window 8

13.1.12 OPC Client

- In **Elipse E3 Studio**, now the OPC Driver's window for selecting the OPC server allows viewing several domains and groups on the local network, and not only the group (or domain) of the computer executing **Elipse E3 Studio**.

13.1.13 OPC UA Driver

- Created the OPC UA Driver object, which allows performing historical queries in **EPM** or any OPC UA server implementing them.

13.1.14 Other Implementations

- Improved the performance when saving **Elipse E3** objects.

- Added logs to detect and register locks in REC's internal methods, as well as improved several logs to indicate clearly the communication channel that generated a message.

13.1.15 Playback

- Changed the way Playback enumerates Database's table fields, improving performance of Playback's database assembling in SQL Server and Oracle.

- Playback, when licensed, now no longer calculates the complete time interval in the database, which makes the initial load (*assembly*) of the database much faster. Users are now free to choose a date and time to start the analysis.

13.1.16 Protection Device

- **Elipse E3** log now displays a description of access errors to the protection device.
- Updated the installer of HASP drivers (haspdinst) to version 6.60.

13.1.17 Query

- Created the **IgnoreQuality** property in the Query object, default is True, which works as the **Include BAD quality** option of the Storage's query configuration window.
- Created the **QueryType** property in Query objects, which allows indicating the type of query: **-1** (Undefined), **0** (DBServer), **1** (Storage) or **2** (OpcUa). The default value is **-1** (Undefined).
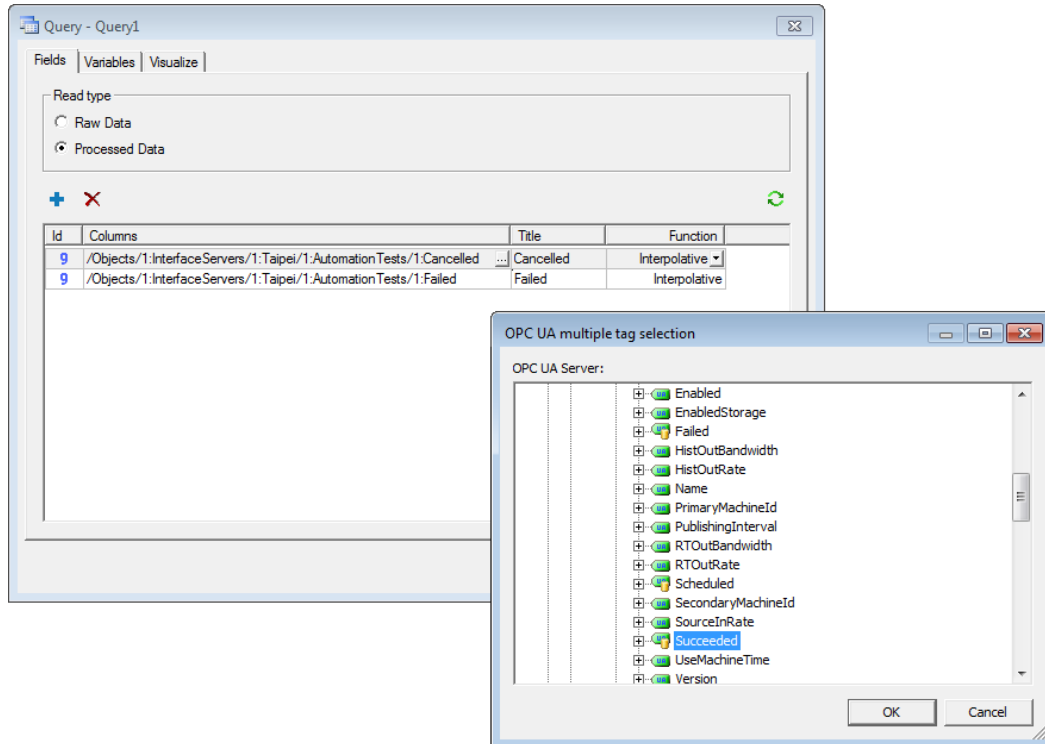
Query using an OPC UA Driver

13.1.18 Studio

- On **Elipse E3 Studio**'s Property List, implemented support for auto-detection of data types entered in a **Variant**-type property.
- Implemented a different icon to indicate, in Organizer, when a project is disabled.
- The **Elipse E3 Studio**'s Screen editor now has shortcut keys for **Bring to Front** (ALT + PAGE UP), **Send to Back** (ALT + PAGE DOWN), **Bring Forward** (ALT + HOME), and **Send Backward** (ALT + END).

13.1.19 Users

- The **Application.IsUserMemberOfGroup** method now has a second parameter that allows specifying a user. If this parameter is omitted or empty, uses the currently logged-in user.

13.2 Fixed Bugs

This section contains bugs fixed in version **4.5** of **Elipse E3**.

13.2.1 ActiveX

- On Screen editor, were removed the ARDesigner and ARViewer2 objects (from ActiveReports) from the contextual menu. *This bug occurred since v3.5.69.*

13.2.2 AppBrowser

- Fixed a problem on AppBrowser window, which could separate the **Paste** and **Cancel** buttons when resizing it. *This bug occurred since v4.0.60.*

13.2.3 Database

- Changed the behavior when renaming and changing the type of columns in Oracle databases. With this, now the minimum required Oracle version supported by **Elipse E3** is 9R2. *This bug occurred since v1.19.87.*
- Fixed the search for Database servers and Storage to ignore brackets in object paths. *This bug occurred since v1.18.147.*
- Fixed race condition situations in asynchronous historical queries (ADO) in **Elipse E3**, which could lead to GPFs, including GPFs in ADO or OLEDB components.
- Fixed a GPF that may occur with Oracle connections when there were operation errors in the execution queue, as well as in immediate operations.

13.2.4 Documentation

- Fixed the usage example of the **InsertColumn** method of a Pen's Legend in **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v3.2.140.*
- Added the description of **Source** property of a Multisource Link Row in **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v3.2.175.*
- Added descriptions for **OnRead** events of OPC Block, OPC Block Element, and OPC Tag objects in **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v1.18.147.*
- Added information about the Storage Session object in **Elipse E3 Reference and Scripts Manual**, related to the **AddField**, **AddValue**, and **Commit** methods. *This bug occurred since v2.5.128.*
- Created separated topics to enlist events, methods, and properties of Link collections (the **Links** property) and Discrete Alarm Source Subconditions (the **Subconditions** property) in **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v4.0.155.*
- Created in **Elipse E3 Reference and Scripts Manual** a new topic in common properties of Server Objects, which contains common properties of Server Objects behaving as Alarm Areas. *This bug occurred since v4.0.169.*
- Updated the description of the **Write** method of the I/O Driver object in **Elipse E3 Reference and Scripts Manual** to remove a mention to an ever-synchronous data writing.*This bug occurred since v3.0.57.*
- Added a new topic about Multiple Links in chapter **Links** of E3 Tutorial for Developers. *This bug occurred since v3.5.164.*
- Performed corrections in several texts and exercises of the E3 Tutorial for Developers. *This bug occurred since v3.5.164.*
- Fixed the description of the **Saves and Runs the Domain** button of **Elipse E3 Studio** in **Elipse E3 User's Manual** and **Elipse E3 Tutorial Developer**. *This bug occurred since v3.5.163.*
- Updated **Elipse E3 Tutorial Developer** on the chapters where there are images with the configuration window for Analog Alarms. *This bug occurred since v4.0.187.*
- Removed references to specific versions of **Elipse E3** in documents where this information is not needed.
- Fixed the screen resolution of CHM files to comply with project configuration. Now all files are opened with the resolution of 1024 by 768 pixels. *This bug occurred since v3.5.183.*
- Fixed the example of the topic **Reports - Usage Examples - Capturing a Screen and Generating a Print Preview**, in **Elipse E3 User's Manual**. *This bug occurred since v1.19.87.*
- Fixed the item **ActorID** on topic **Alarms - Alarm Server - Configurations for Alarm Table Generation** in **Elipse E3 User's Manual**. *This bug occurred since v1.19.383.*

13.2.5 Domain, E3 Server, and Hot-Standby

- Fixed the update in executing Domains. When an update in execution was interrupted by another one, some objects could be updated but not active. *This bug occurred since v3.0.23.*
- Now **E3 Server** restarts in situations of switching or removing the license. In addition, in case it closes due to a license switch with a running Domain, it does not notify the other Hot-Standby server. *This bug occurred since v3.0.456.*
- Fixed the behavior of **E3 Server** when manually closed during the regressive counting to close or restart by a license switch (it may log the error **E00106** incorrectly). *This bug occurred since v4.0.87.*
- Fixed Alarms Summary syncing in Hot-Standby, which was not propagating the events' **EventCLSID** field. *This bug occurred since v3.0.109.*

13.2.6 Drivers and I/O Server

- **Elipse E3** is not limited to process 2000 values per second from a single Driver anymore. *This bug occurred since v1.18.147.*
- Fixed a double counting on I/O Tag licenses when using the **WriteEx** or **Write** methods of a Driver with the same addressing of an existing Tag in the Driver.*This bug occurred since v2.0.108.*

13.2.7 E3Alarm

- E3Alarm now correctly removes messages that changed the status, so that they do not met the display filter. For example, if the filter was only by Alarms, a message that is changed from Alarm to Event would continue to display in E3Alarm. *This bug occurred since v3.2.90.*

13.2.8 E3Browser

- Fixed the handling of finishing queries in E3Browser that, for example, never finished if the query returned an empty data set. *This bug occurred since v1.22.5.*
- Fixed the notification of change that occurred in E3Browser whenever its field collection was saved. *This bug occurred since v1.18.147.*

13.2.9 E3Chart

- Fixed a problem that lead an E3Chart to not display in a Report footer when a page break appeared inside the footer. *This bug occurred since v1.20.174.*
- Fixed a GPF that could occur in E3Chart when updating queries in a Elipse E3 Viewer with slow or unstable communication. This GPF occurred more easily if the application called the **UpdateData** and **FitAll** methods in sequence. *This bug occurred since v4.0.50.*
- Fixed a problem with an E3Chart ignoring non-numerical values, such as **Null**. *This bug occurred since v3.2.105.*
- Now E3Chart's configuration windows put brackets in field names, when needed. *This bug occurred since v2.5.22.*
- Implemented in E3Chart support for child queries with special characters in the name (E3Chart automatically adds brackets when needed). *This bug occurred since v1.20.172.*
- Fixed in E3Chart a problem when evaluating historical Pens with an expression in one of the axes, which could lead a Pen to always get a value of 0 (zero).*This bug occurred since v4.0.168.*
- Changed the E3Chart's drawing forced by Pens with queries, to show error status, even when there is no returned data. *This bug occurred since v4.0.73.*
- Fixed the behavior of editing external queries of E3Chart Pens, which caused the display of invalid values on the combo box to select a query. *This bug occurred since v4.0.107.*
- Fixed a problem in the **CopyConfig** method in E3Chart, which always connected the mark cursor of Pens in the destination E3Chart. *This bug occurred since v3.2.89.*
- Fixed a problem in the **CopyConfig** method, which kept the destination E3Chart redrawing itself and configuring the cursor to search mode. *This bug occurred since v3.2.68.*

13.2.10 E3DataAccess Library

- Implemented event notification support inside an Internet browser in **E3DataAccess Library**. *This bug occurred since v3.0.69.*
- Fixed a possible increase in memory consumption (*leak*) when different threads create and destroy **E3DataAccess Library** objects. *This bug occurred since v3.0.69.*
- Two new methods were added, **ReadValue** and **WriteValue**, replacing the former **GetValue** and **SetValue** methods, which now should be avoided. These new methods correctly handle *IN* and *OUT* parameters when used in scripting languages. *This bug occurred since v3.0.69.*
- **E3DataAccess Library** functions and properties now use data types compatible with VBScript and other typeless languages. *This bug occurred since v3.0.69.*

13.2.11 ElipseX Libraries

- Changed the generation of ElipseX libraries in **Elipse E3**, to allow libraries generated in a system with a certain language to work correctly in systems using a different language. *This bug occurred since v1.18.147.*

13.2.12 Installation

- Removed the installer of Microsoft Visual C++ Redistributable Package from **Elipse E3** and **WebViewer** installers, because it may hang the installer in silent mode. The files of this installer now are moved directly to the **Bin** folder. *This bug occurred since v4.0.37.*

13.2.13 Links

- Optimized **E3 Server** performance when disconnecting a client with many Links. *This bug occurred since v3.0.201.*
- Fixed the handling of discarded remote links, which generated unnecessary remote accesses when they were recycled. *This bug occurred since v4.0.121.*

13.2.14 OPC Client

- Now change notifications of OPC Tag's **Quality**, **TimeStamp**, **RawValue**, **Value**, and **Bit00** to **Bit31** properties are generated only after all values have been updated. *This bug occurred since v1.18.147.*
- The **Value** property of OPC Tags now receives *Null* if the scale fails (if the **RawValue** property is a **String**, **Null**, **Nothing**, or **Array** value, or if the scale configuration is invalid). Previously the property only kept its previous value. *This bug occurred since v1.18.147.*
- OPC Block Elements now only generate **OnRead** events for changes sent by the OPC server (the only exception are writings using the **TrustWriteSuccess** mode). *This bug occurred since v1.18.147.*
- Fixed an **Empty** value that occurred in OPC Block Elements that have never communicated. *This bug occurred since v1.18.147.*

13.2.15 Other Corrections

- Corrected date, time, and time interval rounding when formatted with tenths or hundredths of seconds. *This bug occurred since v4.0.133.*
- Changed the way the number of threads was calculated in each **Elipse E3** process, used by **ProcessInfo** statistics, which used to nearly crash the system if there were a few hundred Drivers executing with enabled statistics. *This bug occurred since v4.0.31.*
- Changed REC channels sending and receiving logic to better tolerate slow networks situations. Also added **Pending Packets** column on **E3 Admin**'s Statistics window.
- Fixed the handling of paths where the dot was not required after a name between brackets. *This bug occurred since v1.18.147.*

13.2.16 Protection Device

- **E3 Server** now tries to start the HASPLMS service before reading the license for the first time.

13.2.17 Query

- The Query object does not save the size of the window and the position of the field area splitter in the application anymore. The query's configuration window now has its position and size saved in the computer executing **Elipse E3 Studio**, and the position fo the field area splitter is not saved anymore. *This bug occurred since v1.21.164.*
- Fixed the return of **TypeName** for Query's Field and Field Collection objects. *This bug occurred since v1.19.137.*
- Changed the behavior of the **SQL** property in Query object, to allow that the empty value return to the behavior of generating the query text automatically.*This bug occurred since v1.19.117.*
- Fixed the internal notification of changes in Queries, when query variables are overwritten with the same values. *This bug occurred since v1.20.237.*
- Fixed the behavior of Storage queries to return, in the **GetADORecordSet** method, a Recordset positioned at the first record. *This bug occurred since v1.21.76.*
- Now it is allowed to set the value **ftNoFunction** at run time in the **FunctionType** property of the Query. *This bug occurred since v1.21.76.*
- Implemented a notification of change in the **Having**, **SQL**, **Table**, **Fields**, **Where**, **GroupBy**, and **OrderBy** properties of the Query object, when these properties change indirectly. *This bug occurred since v1.19.137.*
- Fixed a memory leak on Query's configuration window. *This bug occurred since v1.21.26.*
- Fixed problems when updating the preview window of Query configurations. *This bug occurred since v3.0.186.*

13.2.18 Remote Domains

- Fixed a problem in Links of Remote Domains that started with brackets right after the Domain name. *This bug occurred since v3.0.201.*
- Fixed a problem with simultaneous creation of Links of several Domains, when a failure could lead to failures in other Domains. *This bug occurred since v3.0.201.*

13.2.19 Screen Objects

- Fixed a GPF that occurred in **Elipse E3 Viewer** when a Screen object with keyboard focus was erased in a script. *This bug occurred since v1.19.87.*

13.2.20 Storage

- Fixed a problem when retrieving data in Storage queries with the **CursorLocation** property equal to 1 (**clClient**) in E3Browser. *This bug occurred since v3.0.260.*

13.2.21 Studio

- Fixed the border drawing of the active tab of docked windows in **Elipse E3 Studio**. *This bug occurred since v4.0.176.*
- Fixed a formatting problem in **Elipse E3** window with a warning to not display the window anymore, when the text was too large. *This bug occurred since v3.5.81.*
- Fixed a problem on the Color Palette window in **Elipse E3 Studio**, which locked the properties list window after closing it. *This bug occurred since v2.0.15.*
- Fixed a problem of not closing the active tab with the key combination CTRL + F4 when mouse was over the command buttons in Organizer, with a docked or floating window. *This bug occurred since v2.0.100.*
- Fixed problems in selection and removal of Screen layers. *This bug occurred since v1.18.155.*
- Fixed the update of **Variant**-type values when their types are changed via contextual menu (occurred in several locations in **Elipse E3 Studio**). *This bug occurred since v1.18.155.*
- Fixed the position of Text object when inserted on a scrolling Screen. *This bug occurred since v3.2.214.*
- Now the cursor position is correctly updated when using the mouse wheel during the edition of a Text object. *This bug occurred since v1.19.87.*
- In **Elipse E3 Studio**'s Screen editor, when pressing ESC during text edition, this edition is terminated instead of interpreted as an unknown character. *This bug occurred since v1.20.289.*
- The WatchWindow window was changed to display common properties of objects, as well as specific properties of the instance. *This bug occurred since v2.0.16.*
- Fixed unexpected closing (GPF) that occasionally happened in **Elipse E3 Studio** when using WatchWindow. *This bug occurred since v4.0.121.*
- Implemented a notification of change on the Screen when moving the Rotation Center, or adding or removing an Anchor point of an object. *This bug occurred since v1.18.155.*

13.2.22 Translation

- Fixed the opening text of **Elipse E3**. *This bug occurred since v2.5.122.*
- Fixed the positioning of fields on Add User window. *This bug occurred since v4.0.161.*
- Some messages using the term "connection with" were altered to use "connection to" instead.

13.2.23 Viewer

- Fixed a problem that prevented Read-Only **Elipse E3 Viewers** from accessing via script properties and methods of Domain objects. **NOTE**: It also requires an update on the remote server if the Remote Domain channel is not read-only. *This bug occurred since v3.0.201.*
- Fixed a retry in the REC connection when resolving the server's name fails. *This bug occurred since v1.21.98.*
- Fixed a memory leak that occurred in **Elipse E3 Viewer** during a Screen toggling with **Elipse E3 Viewer**'s cache disabled. *This bug occurred since v4.0.128.*

Version 4.0

This section contains updates of version **4.0** of **Elipse E3**. Please check the next topics for more information about **new features** and **fixed bugs** in this version.

14.1 New Features
This section contains new implementations in version **4.0** of **Elipse E3**.

14.1.1 ActiveX
- **Elipse E3** now install licenses allowing usage of controls of the ActiveX library Microsoft Common Controls 6.0. The DLL still needs to be copied manually.

14.1.2 Alarms
- Implemented an optional Alarm Area behavior for any server object.
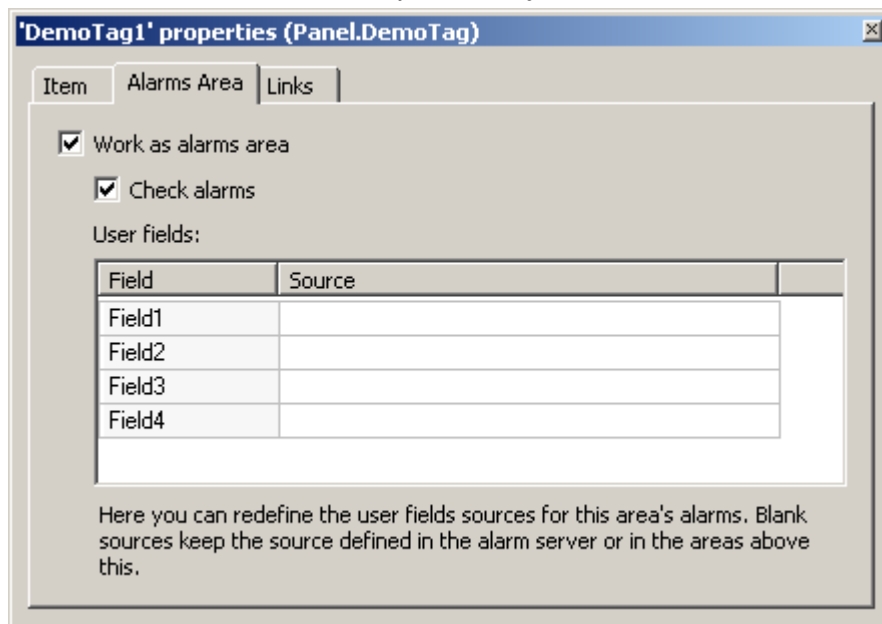
Server object as an Alarm Area

- Created the Discrete Alarm, which has a configurable list of subconditions.
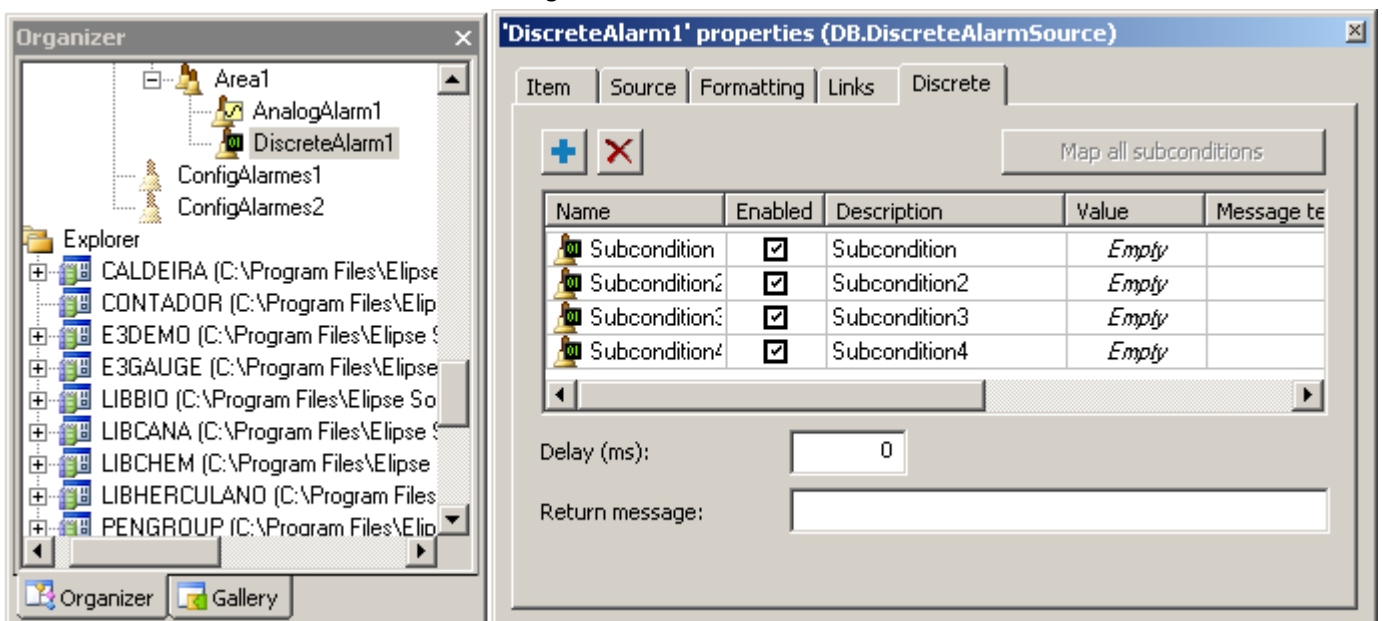
Discrete Alarm

- Created four new properties for Analog Alarm subconditions, which allow configuring separately whether a subcondition is handled as an event or not. These properties are **LoLoEvent**, **LoEvent**, **HiEvent**, and **HiHiEvent**.
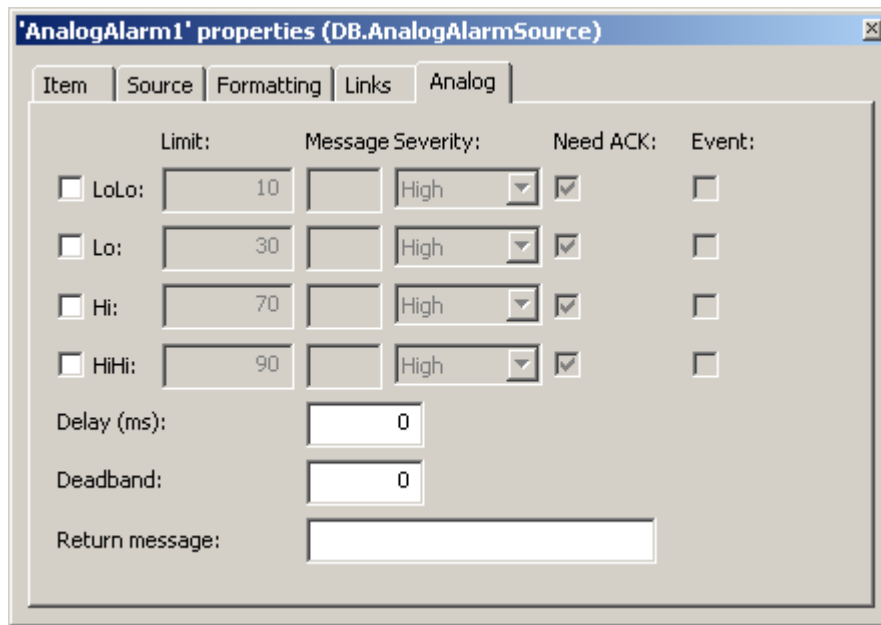
Analog Alarm

14.1.3 Databases

- Improved log messages regarding connection, closing, and reconnection of the Database Server.
- Improved and standardized logs for data table update operations (Historics, Alarms, and Formulas) kept by **Elipse E3**.

14.1.4 Demonstration Application

- Added the PenGroup library to the demonstration application, which aims to provide a tool to search for data and display charts, thus creating a faster way of performing application settings, and also allowing a powerful analysis interface for the end user.

14.1.5 Documentation

- Added information in **Elipse E3 User's Manual** about limitations of the **Demo** mode.
- Added feedback forms on **Elipse E3**'s document topics in CHM format.
- Added address and phone numbers of Rio de Janeiro branch on PDF templates for documentation.
- Changed the topic structure of **Elipse E3 Reference and Scripts Manual** to reflect the hierarchy of **Elipse E3 Studio**'s Organizer.
- Added the **Elipse E3 Tutorial Developer** in **Elipse E3** installer.

14.1.6 Domain, E3 Server, and Hot-Standby

- Changed the configuration interface of the local access path to Domain files. Also implemented warnings about common configuration errors for this option.
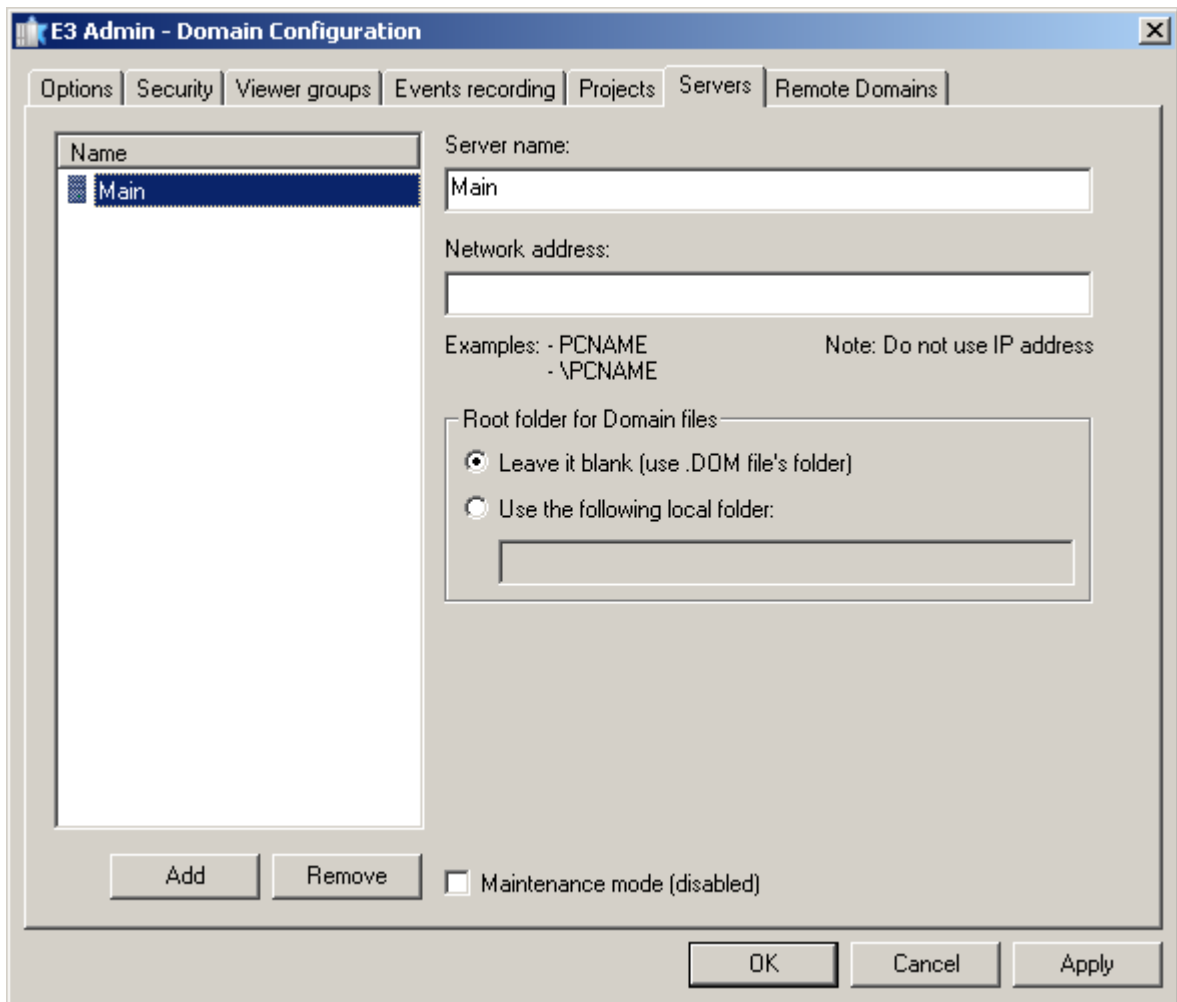
Configuration interface of the local path

14.1.7 Drivers and I/O Server

- Implemented support for relative paths in I/O Driver's **DriverLocation** property.

14.1.8 E3 Tweak

- Added the module **OCIThread** to log section **FullDB** in **E3 Tweak**.

- Added the modules **ServerSubscriptionManager**, **AlarmQueue**, and **RemoteDomainsManager** to log section **Full** in **E3 Tweak**.

- Added log section **PowerEngine** in **E3 Tweak**. This section contains the modules **Input**, **LoadShed**, **Output**, and **PowerEngine**.

14.1.9 Installation

- Changed the clause 4 of the software license, which deals with protection device's theft or loss.

- Updated basic components of OPC Core Components (x86) in **Elipse E3** installers.

- Integrated eeLogs version 4.5.37, which corrects problems related to recovery of deleted files on some operating systems, support for installation on **Windows 8**, among other improvements.

14.1.10 Links

- Created object contexts, which work as shortcuts to parent objects, and can be used in Links (by using **@(context)**) and scripts (by using **Context("*context*")**).

14.1.11 Other Implementations

- Created the option **HeapLog.{PROCESS}** in Windows Registry to generated detailed logs about memory usage of **Elipse E3** processes.

- Added the option **OANOCACHE** in **Elipse E3** log configuration in Windows Registry, which allows disabling the BSTR cache of OLE Automation. **NOTE**: It should be enabled only to improve BSTR memory leak diagnosis, because it degrades memory allocation performance for **Strings**.

14.1.12 Playback

- Playback queries retrieving Storage data were optimized when there are many Tags involved. Now the **In** function is used, instead of **>**, **<**, **AND** , and **OR** operators to indicate field IDs to search for.

14.1.13 Protection Device

- **E3 Server** now allows reprogramming or replacing a protection device on the fly. If licenses are removed, the **E3 Server** is automatically restarted. If licenses are added, then it may be necessary to restart the Domain to use these additional licenses.
- Updated the installer of HASP drivers (haspdinst) to version 6.22.

14.1.14 Studio

- Improvements on **Elipse E3 Studio** interface:
  - Implemented a middle-click to close the tab under mouse pointer
  - Implemented an option to display a button to close the active tab on the tab itself, or on the right side of all tabs. This option can be configured in the **Options** window, on **Tools** menu
- Other improvements in **Options** window of the **Tools** menu:
  - Changed the name of **Studio** tab to **General**, and also changed its position to be the first one
  - Changed the name of **Editor** tab to **Scripts Editor**
  - Adjusted the size of **Studio** tab to conform to the standard
- Created shortcuts to open **Log Viewer** and **E3 Tweak** from inside **Elipse E3 Studio**, as well as shortcuts to open **Log Viewer**, **Elipse E3 Studio**, **Elipse E3 Viewer**, and **E3 Tweak** from **E3 Admin**.
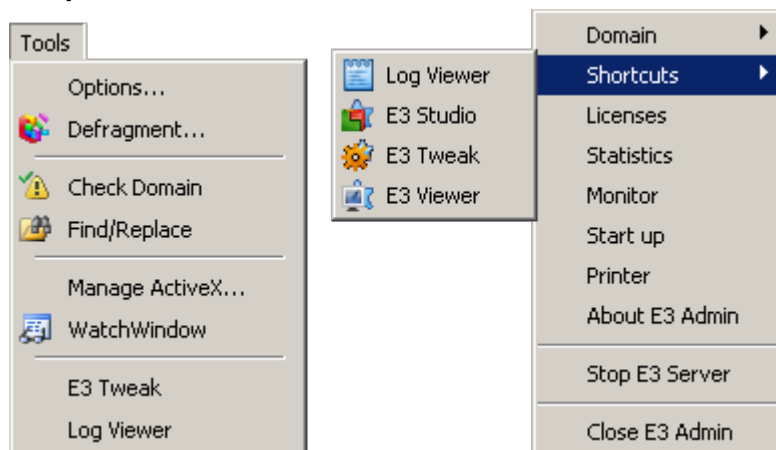
Shortcuts on Elipse E3 Studio and on E3 Admin

- Created methods **CreateFile**, **CreateFolder**, and **CreatePRJ** in Studio's Application object.
- Created the method **RenameFolder** to rename a Folder via scripts executing in Studio.
- Removed an unused space on the left side of cells on the first column of all tables in **Elipse E3 Studio** that are not hierarchical, such as the **Links** tab.
- Implemented a window for scripts execution errors in **Elipse E3 Studio**, the same one appearing in **Elipse E3 Viewer**.
- Implemented a cache of images or Metafiles in **Elipse E3 Studio**. Thus, if the same image is used several times on the same Screen, or on different Screens, it is loaded on memory only once.
- Gallery does not display error messages relative to Screen or XControl loading anymore.
- The Screen Editor now always adjusts object coordinates to the nearest pixel (a *Snap to Pixel* effect). Also added the shortcut key CTRL + SPACEBAR, which moves the selected objects to the nearest pixel.
- Gallery thumbnails are now drawn using the **High Quality** mode (GDI+).
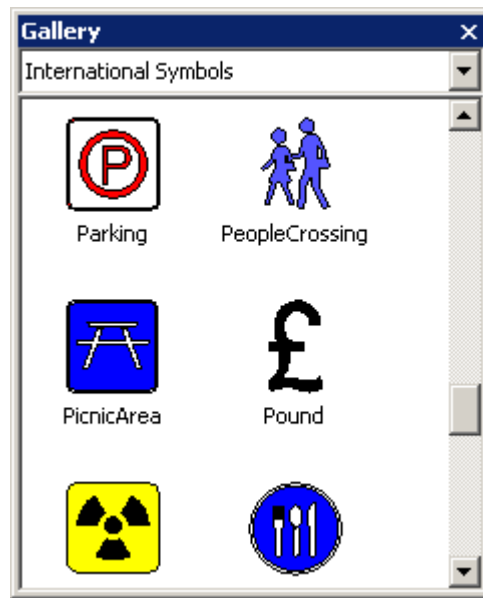
Gallery

14.1.15 Users

- The **Elipse E3** user database now allows integration with Windows users.

Login integrated to Windows

- Names of **Elipse E3** users and groups are not case sensitive anymore. For example, it is not allowed to create an "AAA" user anymore, if there is already an "Aaa" user. When performing a login, case-insensitive typing is now allowed.

- The window for user edition, or the **Application.UserAdministration** method in Viewer, now allows removing and changing the Administrator configuration of the currently logged-in user.

14.1.16 Viewer

- Implemented a **High Quality** mode on **Elipse E3** Screens drawing, using GDI+. The quality of screen drawing is controlled by the new **RenderQuality** property of Viewer and Screen objects.
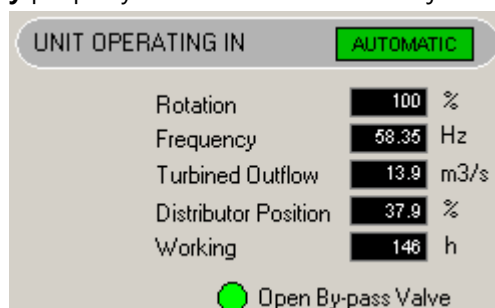
Normal quality mode (GDI)
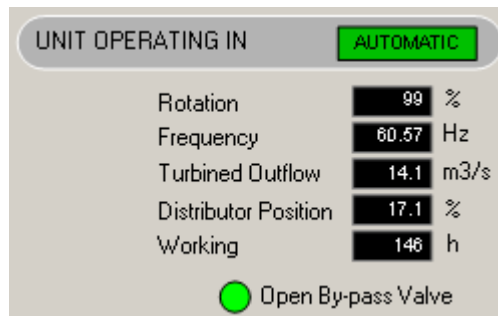
High quality mode (GDI+)

- Added support to multi-touch for screen scrolling and zoom on **Elipse E3 Viewer** and **Elipse E3 Studio**, in devices accepting that functionality.

- Added zoom control on Screens via keyboard (CTRL + PLUS SIGN, CTRL + MINUS SIGN, and CTRL + ASTERISK) and mouse wheel.

- Added options to **Elipse E3 Viewer** Screens' zoom menu to change the drawing quality of the current Screen, and for all **Elipse E3 Viewer**'s Screens.
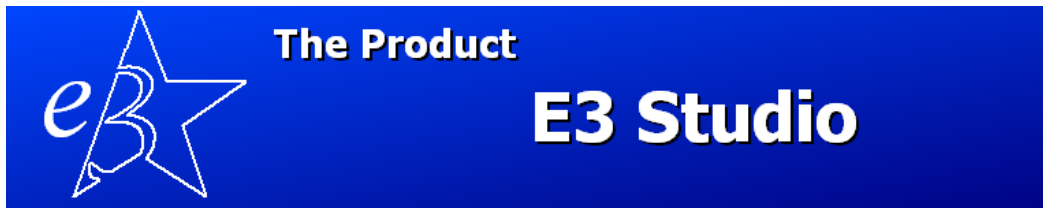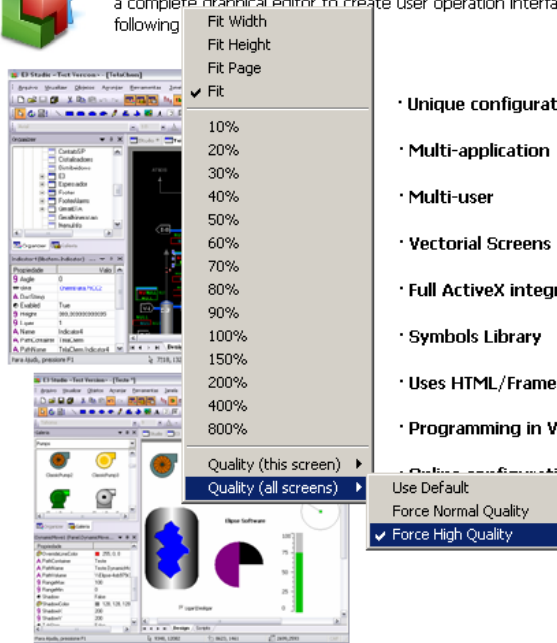
Viewer's zoom menu

14.2 Fixed Bugs

This section contains bugs fixed in version **4.0** do **Elipse E3**.

14.2.1 AppBrowser

- The AppBrowser now correctly lists the **AddObject** and **DeleteObject** methods for all server objects where they can be used. *This bug occurred since v3.5.41.*

14.2.2 Database

- Database Server's **TimeoutConnection** and **TimeoutCommand** parameters were ignored in an OCI Oracle connection, and now they are respected, avoiding a long wait on operations.

- Fixed in log messages the value for how long backup and discard operations on database tables last. *This bug occurred since v3.0.256.*

- **E3Run** now uses a thread pool to handle Database queries. This pool fixes a COM memory leak, which may occur in **E3Run** and in **E3 Server**.

14.2.3 Documentation

- Added more information to Storage Field's **DeadBand**, **DeadBandUnit**, **MaxRecTime**, and **MinRecTime** properties, in **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v3.0.308*.
- Added detailed information about subproperties of Text's, Display's, and Setpoint's **TextFont** property in **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v1.21.17*.
- Changed IIS settings in **Windows Vista** and **Windows 7** in **Elipse E3 Installation Guide** to remove the steps to create a new virtual directory. Settings are performed in the default website, created during IIS installation.
- Updated the chapter **Storage - Internal Queries - TagAttribute**, in **Elipse E3 Tutorial Developer**, to add the **Integer** data type. *This bug occurred since v3.5.90*.
- Added detailed information about the behavior of E3Chart Pen's **AutoQuery** property, in **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v1.21.119*.

14.2.4 Domain, E3 Server, and Hot-Standby

- Fixed a problem in the procedure that creates or updates **Elipse E3**-handled tables, which stalled **E3Run** or **Elipse E3 Studio** in case database table **_Fields** was corrupted (having two fields with the same FieldID). *This bug occurred since v1.19.87*.
- Fixed a problem in **E3 Server**'s Hot-Standby, where both servers entered a Hot state when one server was removed from **Standby** mode. For more information, please refer to *https://kb.elipse.com.br/bug0009236-both-servers-activated-when-a-server-leaves-maintenance/*. *This bug occurred since v3.1.1*.

14.2.5 Drivers and I/O Server

- Fixed the I/O Server's registration removal to not fail if the I/O Server was not already registered. *This bug occurred since v3.1.1*.
- Blocked reentrant generation of I/O Driver's **OnCommError** and **OnCommErrorEx** events.
- Fixed a problem when propagating quality and timestamp of I/O Tags, which occurred before updating Tag's value.
- The I/O Tag's **Value** property now receives Null on scale failure (if the **RawValue** property has a **String-**, **Null-** or **Array-**type, or if scale configuration is invalid). Previously this property simply retained its previous value.
- Fixed a problem in an I/O Block Element's **RawValue** property, which propagated an 'Empty' value instead of 'Null' when Block was read or deactivated, and the Element's index was invalid (for example, larger than the Block size).

14.2.6 E3 Tweak

- Fixed the default value of REC compression. The correct value is 0 (zero), not 6 (six). *This bug occurred since v3.2.209*.

14.2.7 E3Chart

- Starting an E3Chart query was unlinked from its drawing and linked to the refresh timer, leading to fast screen opening and lighter automatic queries when dragging the Screen. *This bug occurred since v1.22.71*.

14.2.8 E3DataAccess Library

- Fixed **E3DataAccess Library**' **RegisterCallback** method behavior, which did not work when used for the second time. *This bug occurred since v3.2.123*.

14.2.9 ElipseX Libraries

- Fixed a problem with Links pointing to an XObject updated with the Domain still executing. *This bug occurred since v3.0.238*.

14.2.10 Expressions

- Fixed a **Elipse E3 Viewer**'s memory leak when evaluating Links with expressions, which occurred when objects with Links were activated and then deactivated. *This bug occurred since v3.0.137*.
- Implemented **Strings** usage on second parameter of **String** function on **Elipse E3** Link expressions.

14.2.11 Find and Replace

- Fixed the implementation of **Find and Replace** tool to include in the search the properties **DocString**, **Public**, and **Retentive** of an ElipseX's property definitions. *This bug occurred since v1.19.132.*

14.2.12 Gallery

- Fixed a problem when generating XControl thumbnails in the Gallery, which could cut their borders, or a cut border on larger borders. *This bug occurred since v2.5.121.*

14.2.13 Import and Export

- Fixed the Template Configuration window of the Import and Export tool, that does not list runtime-only properties anymore. *This bug occurred since v3.1.113.*
- Fixed a problem with E3Chart Pens not being imported. *This bug occurred since v3.5.264.*

14.2.14 Installation

- All links in installers now point to *www.elipse-software.com. This bug occurred since v3.0.170.*
- **Elipse E3** installers are now compatible with **Windows XP Embedded**, and they do not need to be restarted after finishing installation. *This bug occurred since v1.20.183.*
- Fixed a bug in **Elipse E3** installers, which prevented installation on hard disks with more than 2TB of free space.
- Fixed a problem with Microsoft Office that prevented it to open files downloaded from internet, or attached to e-mails after installing **Elipse E3**. *This bug occurred since v1.19.87.*

14.2.15 Links

- Improved performance of Screen switching, or activating objects on server, when using ElipseX objects connected to Remote Domain objects. *This bug occurred since v3.0.201.*
- Fixed a deadlock that could occur between **E3Run** and **E3 Server** during Link removal. *This bug occurred since v1.19.93.*

14.2.16 Other Corrections

- Fixed a failure when decompressing REC packages. In case a package was received fragmented on a specific size, this could case a disconnection of the REC channel. *This bug occurred since v3.0.9.*
- Fixed a memory leak occurring in **Elipse E3 Viewer** or in **E3Run** when a Link containing a **String** or an **Array** was activated or deactivated. *This bug occurred since v3.0.197.*
- Fixed a data and time rounding when milliseconds are not displayed. Also fixed a value rounding when displaying only deciseconds or centiseconds.
- Fixed a GPF when removing an object from a script, triggered by a user-defined event of the object itself. *This bug occurred since v2.0.122.*
- Fixed a memory leak occurring on server, **E3Run**, when an object was removed at run time from scripts of the object itself.
- Fixed a formatting problem of large time intervals in statistical logs (RUN, UTM, and KTM) of **Elipse E3** *ProcessInfo*. *This bug occurred since v3.5.179.*

14.2.17 Protection Device

- Removed license information from **Elipse Power** that appeared when a license borrowing of Studio licenses to an **Elipse E3** Demo occurred. *This bug occurred since v3.5.111.*

14.2.18 Remote Domains

- Improved the performance of **Elipse E3** remote Links, by using a cache that keeps remote Links for at least 15 seconds, event when not used. *This bug occurred since v3.2.108.*
- Fixed a memory leak that could occur in an **E3 Server** when using Remote Domains with asynchronous Link creation. *This bug occurred since v3.2.122.*
- Fixed a memory leak that could occur in an **E3 Server** when a Remote Domain reconnected. *This bug occurred since v3.0.201.*

- Optimized removal of Remote Domain Links, now performed in blocks. This prevents client-side crashes when disconnecting from a server Remote Domain. *This bug occurred since v3.0.201.*

14.2.19 Query

- Fixed a GPF in **Elipse E3 Studio**, which occurred when testing a Query (E3Query) with a cache of BSTRs from OLE Automation disabled (**OANOCACHE** equal to 1).

14.2.20 Screen Objects and Interface

- Fixed a problem in Text, Display, and SetPoint objects, which did not change their values when receiving an unsupported value.
- The **DrawPicture.Convert** property now only accepts changing its value to 1 (convert to symbol) if the image is a Metafile (a .wmf or .emf file). For other image types (for example, .bmp, .jpg, or .ico), conversion fails and the **Convert** property still gets the value 0 (zero).
- Fixed a problem in the DrawPicture object, which even with a Metafile converted to symbol (the **Convert** property equal to 1) still tried to load the image from disk. In this situation, in case there was a failure during image load, the object was incorrectly drawn.
- Fixed a problem in border drawing of objects with partial fill (the **VerticalPercentFill** or **HorizontalPercentFill** properties less than 100) that are inside a group with the **EnableOverrideLineColor** property set to True, where the border was not drawn with group's color.
- Fixed a problem in DrawPicture objects that contain a Metafile (the **Convert** property equal to 0) with opaque background (the **BackgroundStyle** property equal to 1), and partial horizontal fill (the **HorizontalPercentFill** property less than 100), where the shadow was drawn with the background color (the **BackgroundColor** property) instead of the shadow color (the **ShadowColor** property).
- Fixed a problem in DrawPicture objects that contain a Metafile (the **Convert** property equal to 0) with opaque background (the **BackgroundStyle** property equal to **1 - Opaque**) and in **Wireframe** mode (the **OverrideFillMode** property equal to **1 - Wireframe**), where drawing the background.
- Fixed a problem in DrawPicture objects that contain a Metafile converted to symbol (the **Convert** property equal to 1), and partially filled (the **HorizontalPercentFill** or **VerticalPercentFill** properties less than 100).
- Fixed a problem with drawing of groups of objects (DrawGroup) in **Wireframe** mode (the **OverrideFillMode** property equal to **1 - Wireframe**), where the non-filled area of opaque child objects was filled with background color (this area should remain transparent in **Wireframe** mode).
- Fixed a problem with drawing of a DrawLine object with a dashed or dotted border, when this object has only two points (a straight line), and fill mode is different from **Hollow**.
- Improved **Elipse E3** consistency with invalid color values (outside the range between &h00000000 and &h00FFFFFF), which could lead objects to be drawn with random colors.

14.2.21 Script Editor

- Fixed a problem in the Script Editor when there is a **String** terminated by "\". The rest of the sentence remained colored as if it belonged to that **String**. *This bug occurred since v2.0.52.*
- Fixed a duplication of "%" characters in the list of compilation errors in **Elipse E3 Studio**'s script window. *This bug occurred since v1.19.87.*
- Partially fixed problems in Script Editor when coloring lines started by "REM" where, in some cases, the text remained in green.

14.2.22 Storage

- Fixed a problem preventing a server with no Storage-recording licenses to perform queries on Storage's database. *This bug occurred since v3.5.285.*
- Improved precision of interpolated data returned by Storage's **SampledData** query. *This bug occurred since v2.0.163.*
- Small performance improvement for Storage's **SampledData** query. *This bug occurred since v3.0.150.*

14.2.23 Studio

- Fixed a problem of not showing a button to open the window to search for files in Digital or Analog Link fields with properties expecting a figure's file name, as the Picture's **FileName** property. *This bug occurred since v3.2.137.*
- Now the window Position of Property Window keeps its selection, even when alternating between a Screen and a Screen control. *This bug occurred since v1.19.133.*

- Now users can alternate between uppercase and lowercase (or vice versa) for a root object, Folder, or Resource name without incrementing this name. *This bug occurred since v2.5.32.*
- Fixed the update of the list of recent Files and Domains of the **File** menu in **Elipse E3 Studio**, when opening an item fails.*This bug occurred since v3.0.223.*
- Fixed a problem in the **Close** button on the left side of **Elipse E3 Studio** tabs, which could lose mouse clicks. *This bug occurred since v3.1.98.*
- Fixed a memory leak in GDI objects of **Elipse E3 Studio**'s Screen editor, which occurred during edition of DrawString object's text.
- Fixed a problem in links to **Elipse E3 Reference and Scripts Manual** inside **Elipse E3 User's Manual** not working when this document was opened inside **Elipse E3 Studio**. *This bug occurred since v3.2.118.*
- Fixed a problem in duplicated toolbars when installing a language version different from the previously installed one. *This bug occurred since v1.22.71.*

14.2.24 Translation

- Fixed the translation of "licenses not available" for **Elipse E3 Viewer** and E3Playback. *This bug occurred since v1.22.71.*
- Fixed the message displayed by **E3 Admin** when a protection device is disconnected. *This bug occurred since v1.22.24.*

14.2.25 Users

- Screen folders now are not repeated in the User Permission window in **Elipse E3 Studio**. *This bug occurred since v3.1.150.*

14.2.26 Viewer

- Fixed a script error message occurring when a **Elipse E3 Viewer** script tried to access a non-existing property or method in a Server object. The script error was displayed empty, instead of indicating "The object does not support this method or property". *This bug occurred since v2.0.118.*
- Fixed the behavior of the **Elipse E3 Viewer**'s Login window, which did not stop login retries in case the window was canceled. *This bug occurred since v2.0.118.*
- Fixed a problem when resizing modal windows, when the lower or right corner was displayed on monitor's negative coordinates (or monitors). *This bug occurred since v1.18.155.*
- Fixed a problem when handling keys in **Elipse E3 Viewer**'s modal screens, which lead **KeyDown** and **KeyUp** Screen scripts to be executed twice or more on every pressed key. *This bug occurred since v2.0.90.*

14.2.27 WebViewer

- Fixed the behavior of keys in windowed screens open in **WebViewer**. *This bug occurred since v1.20.216.*

15 Version 3.5

This section contains updates of version **3.5** of **Elipse E3**. Please check the next topics for more information about **new features** and **fixed bugs** in this version.

15.1 New Features
This section contains new implementations in version **3.5** of **Elipse E3**.

15.1.1 Alarms
- Now users are allowed to insert Alarm Sources anywhere in an application, as long as they execute in the Server. Added the **AreaNameOverride** property to the Alarm Source object.
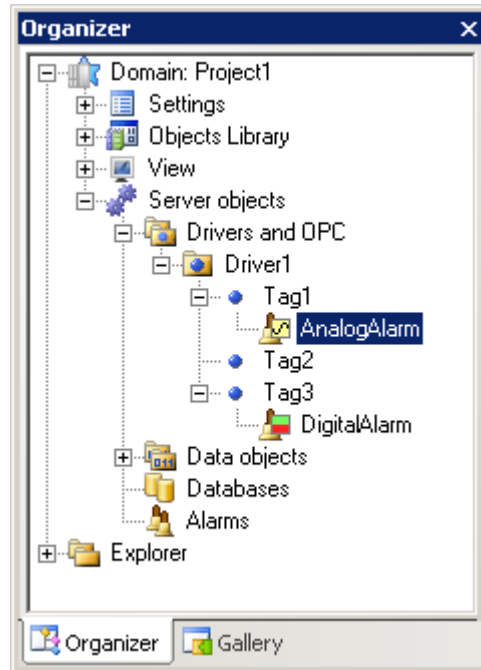
Insert Alarm Source

15.1.2 AppBrowser
- Added to the AppBrowser window a new area displaying the documentation corresponding to the selected method or property.
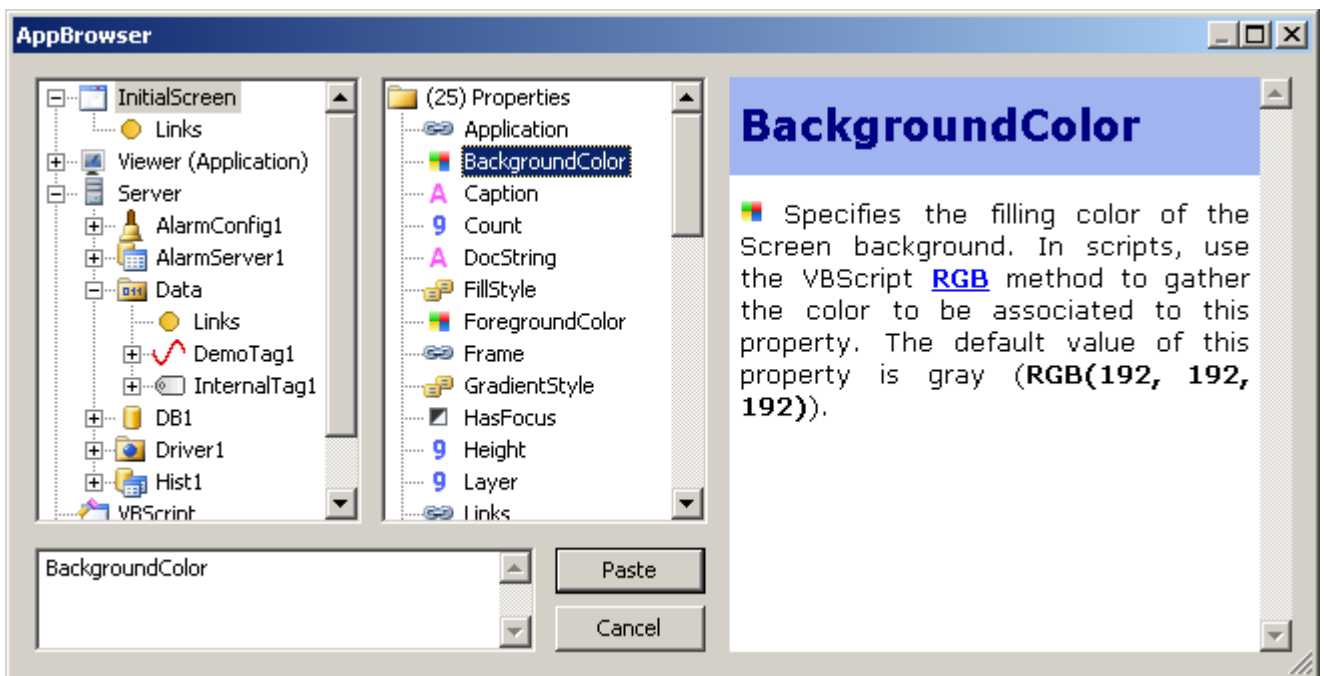
AppBrowser window with documentation

15.1.3 Documentation

- Updated the address of Taiwan branch in the templates for generating **Elipse E3** documentation in PDF format.

- Added information on **Elipse E3 User's Manual** about the new parameter **URLToLoad**, responsible for loading a web page after installing **WebViewer**.

- Updated the section **E3Chart - Runtime Behavior - Legend State Column**, on **Elipse E3 User's Manual**, to include information about new status messages of E3Chart Pens.

- Added the **Previous** and **Next** buttons in the toolbar of the documentation in CHM format, to facilitate navigation among topics.

- **Elipse E3 Release Notes** now contain bug fixes and new features added on previous versions, starting with version 3.2, not only the current version.

- Added a link to the official documentation from Microsoft about the ADORecordSet object, returned by the **GetADORecordSet** method of the Query object on **Elipse E3 Reference and Scripts Manual**.

- Added links to articles on **Elipse Software**'s Knowledgebase website on **Elipse E3 Reference and Scripts Manual**, about how the **SetValueData** method of the Formula object works.

- Added information on **Elipse E3 User's Manual** and on **Elipse E3 Reference and Scripts Manual** about the operation, methods, and properties of the **Elipse KeyPad**.

- Added a description of the **DefaultValue** and **HelpString** properties of the Property object of an XObject on **Elipse E3 Reference and Scripts Manual**.

- Modified the topic structure of **Elipse E3 Reference and Scripts Manual** to allow the documentation integration with AppBrowser.

- Generated an **Elipse E3 Tutorial** in Spanish, available on installations of that language.

- Added the **Basic Tutorial** in CHM to the installer. The shortcut to the CHM is available in the documentation folder.

- The topic **Tab Order among Objects** of the chapter **Screens and Screen Objects - General Configurations** of the **Elipse E3 User's Manual** was rewritten, adding more information and a link to the topic **Object Overlaying**. Besides, the example of the topic **Tab Order** of the chapter **Frequently Asked Questions** was moved to that topic.

- Added a note in the chapter **ActiveX** of the **Elipse E3 User's Manual**, alerting for the need to install ActiveX objects not automatically registered by **Elipse E3**, in case these objects have a need to be accessed in several computers, specially Remote **Elipse E3 Viewers**.

- Added in the FAQ about Alarms of **Elipse E3 User's Manual** a question about how to display textual expressions for numerical values of the **Severity** field of an Alarm.

15.1.4 Domain, E3 Server, and Hot-Standby

- The time for opening applications with many Tags has been optimized due to improvements in the I/O license management system.

- The configuration of the Hot-Standby integrity IP now accepts multiple IP values, increasing the reliability of the integrity checking.
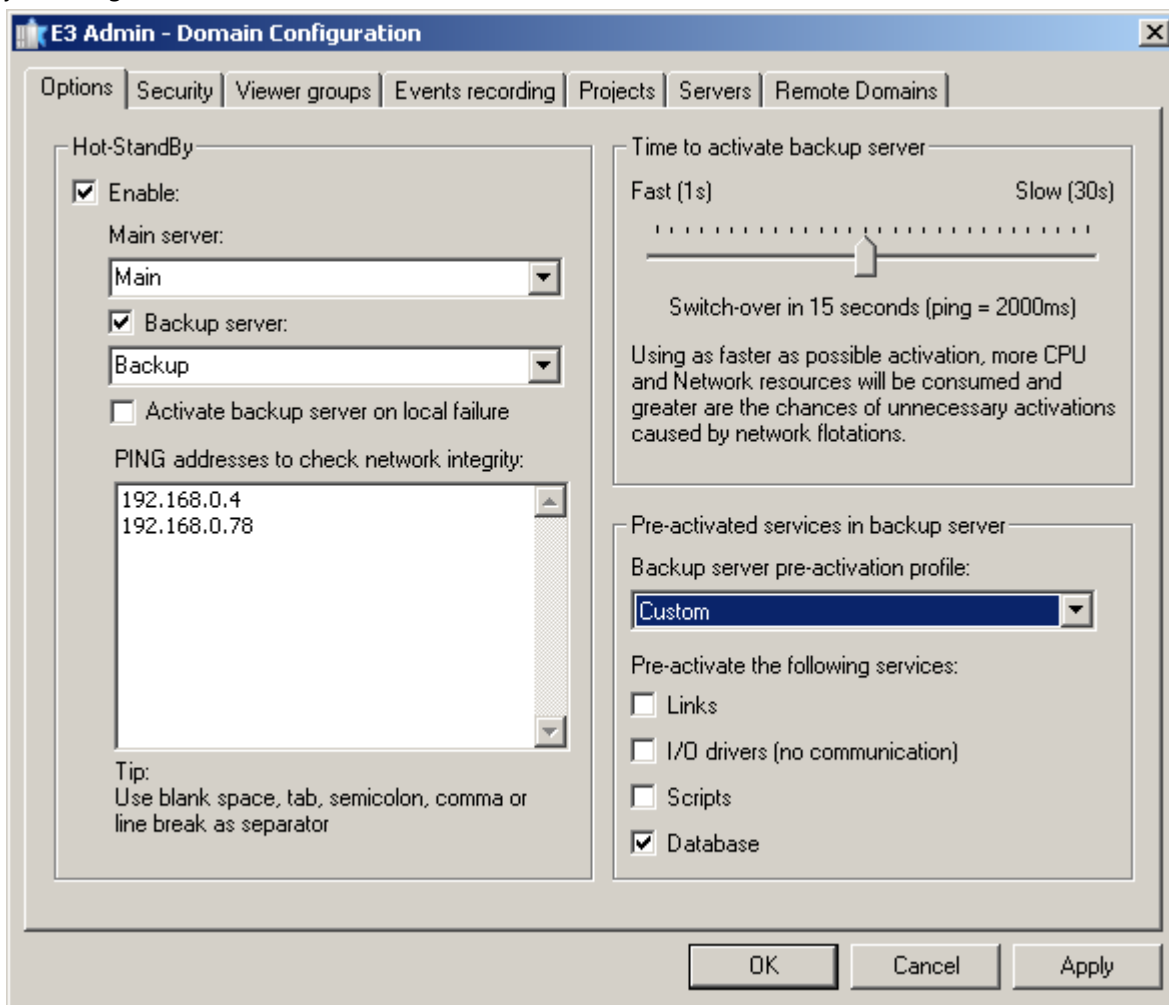
Checking multiple IP addresses

- In **Elipse E3 Studio**, the option for creating several objects at the same time was optimized. For example, the time to create 10000 Demo Tags was reduced from 95 to 4 (four) seconds.

15.1.5 Drivers and I/O Server

- The **E3Run** process does not load or unload Driver DLLs anymore, then decreasing a little the memory consumption of the process and avoiding memory leaks caused by DLL unloading.

15.1.6 E3Chart

- The **MaxGapTime** property was added to the Pen object of the E3Chart. This property allows specifying the limit time to be considered to create a visual connection between the historical and real time part in the Historical & Real Time Pen.

- Added new properties to the Axe and Legend of an E3Chart, which allow more color customization: **Axis.EnableTextColor**, **Legend.EnableTextColor**, and **Legend.BackColor**.

- Created the **HighlightMaxGapTime**, **MaxGapTimeStyle**, and **MaxGapTimeColor** properties to allow highlighting, if desired, the line which connects historic to real time in the Historical & Real Time Pen, when this connection depends on the value of the **MaxGapTime** property.

- Improved the Pen's status message to help diagnose configuration problems.

15.1.7 E3 Tweak

- Added two new configuration options in **E3 Tweak**, **PingRetries** and **PingRequired**.

- Added the log section **Storage** in **E3 Tweak** and its modules **Input**, **Stored**, and **Dropped**. Added also a new item which allows filtering Tags from the section **Storage** which are stored in the log.

- Added an option in **E3 Tweak** to configure the frequency of statistical logs of the REC.

- Added items in **E3 Tweak** to configure statistical logs of processes for modules **E3Admin**, **PslEngine**, **E3Run**, **E3Server**, **IOServer**, **Studio**, and **Viewer**.
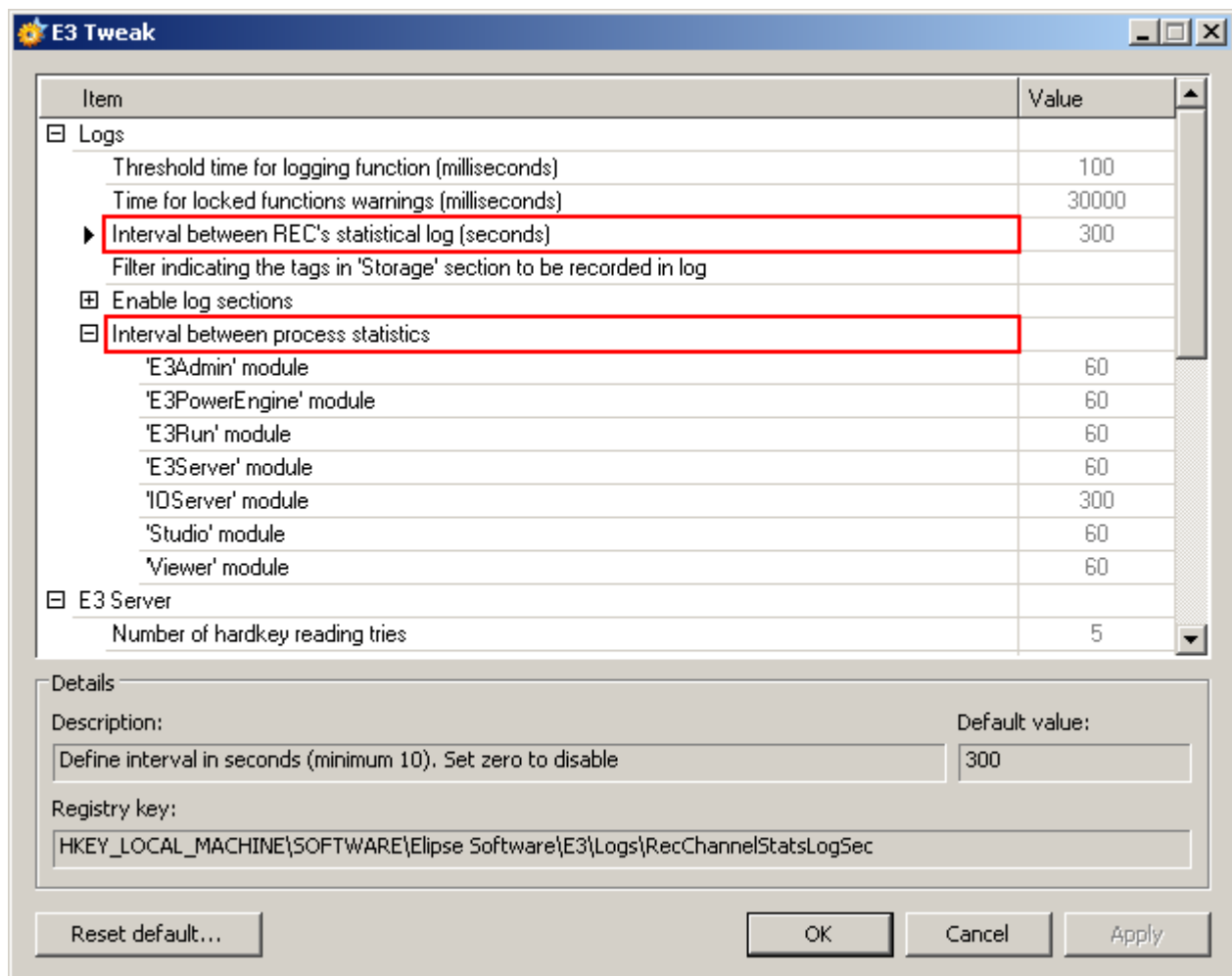
New log configuration items in E3 Tweak

15.1.8 Installation

- Updated the installer of HASP drivers (haspdinst) to version 5.95.

- Integrated eeLogs version 4.5.18, which corrects performance problems detected on event generation, after changes on the security level that **Windows 7** and **Windows 2008 R2** systems specify for access to certain users to object on the operating system.

- Installers were modified to support the **Windows 7** operating system.

- Added the Tutorial in Spanish to the installer e3full-x86-esn.exe.

- The name of the folder which contains files referring to the protection device was modified from **HInstall** to **HASP**.

- The former **E3 Tutorial** was removed from **Elipse E3** installers.

- Updated the digital certification used in **Elipse E3** installers and binary files (exe, ocx, dll, etc.). The new digital signature expires on 9/13/2011.

15.1.9 Interface

- The property list of **Elipse E3 Studio** now displays a button to open AppBrowser when the **Source** property of the Alarm Source object is selected.

- The read-only cells of grids, such as the ones in Drivers and Data Server views and some windows such as Links and Property Lists, are not editable anymore. It is not allowed typing values anymore, which would be discarded because it was a read-only cell.

- The windows with a variable number of buttons, like the ones displaying the options **Yes To All** or **No To All**, have been standardized according to layout recommendations from Microsoft.

- Changed the color view in the result list of the Search and Replace window. Colors now are displayed in RGB and the column does not show an icon with the data type anymore.

- Changed the behavior in searching or replacing dates and times, allowing searches and replaces only for dates, times, or both.

- Added two buttons in the **Alignment** toolbar of **Elipse E3 Studio**, **Horizontal Flip** and **Vertical Flip**.

Horizontal and vertical flip options

- The Property List of **Elipse E3 Studio** now displays the documentation of the selected property. Besides, it also displays the text "null" or "empty" italicized when a **Variant** property has a type **VT_NULL** or **VT_EMPTY**, respectively.
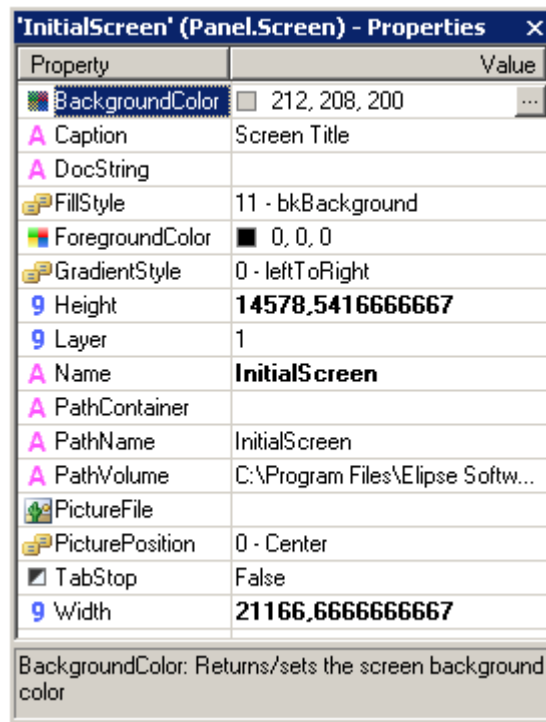

Documentation of the selected property

- Implemented the Connector object in the Screen editor. This object allows connecting points among two or more Screen objects. Connections among objects are displayed during drag and drop operations in the Screen editor. Besides, the implementation of native Screen objects has been revised, to ensure the correct positioning of Connection Points of objects in any combination of rotation, resizing, reflection, or distortion.
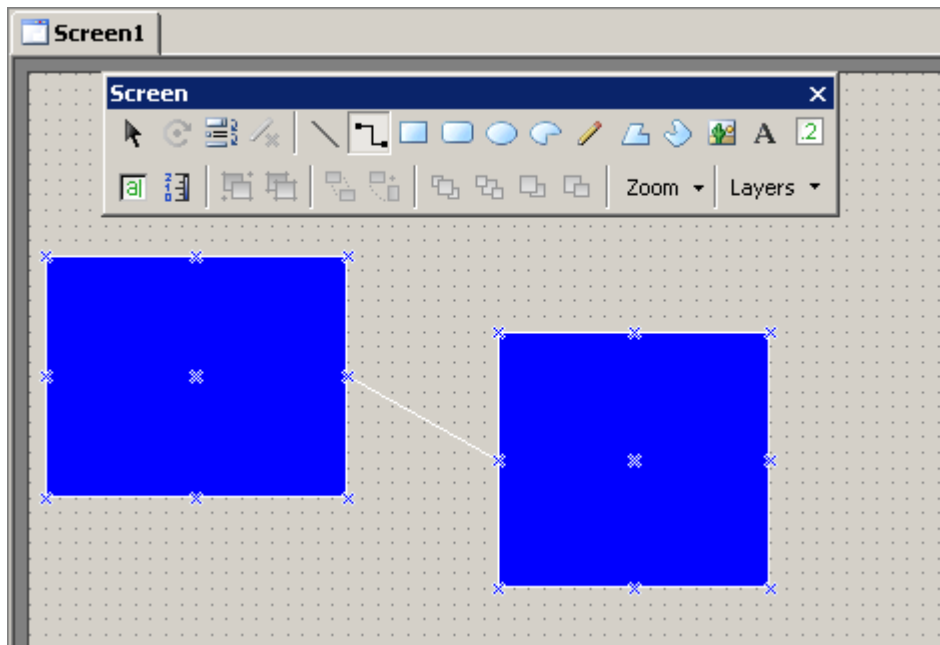
Connector object

- Added a tool for editing Connection Points for XControls.
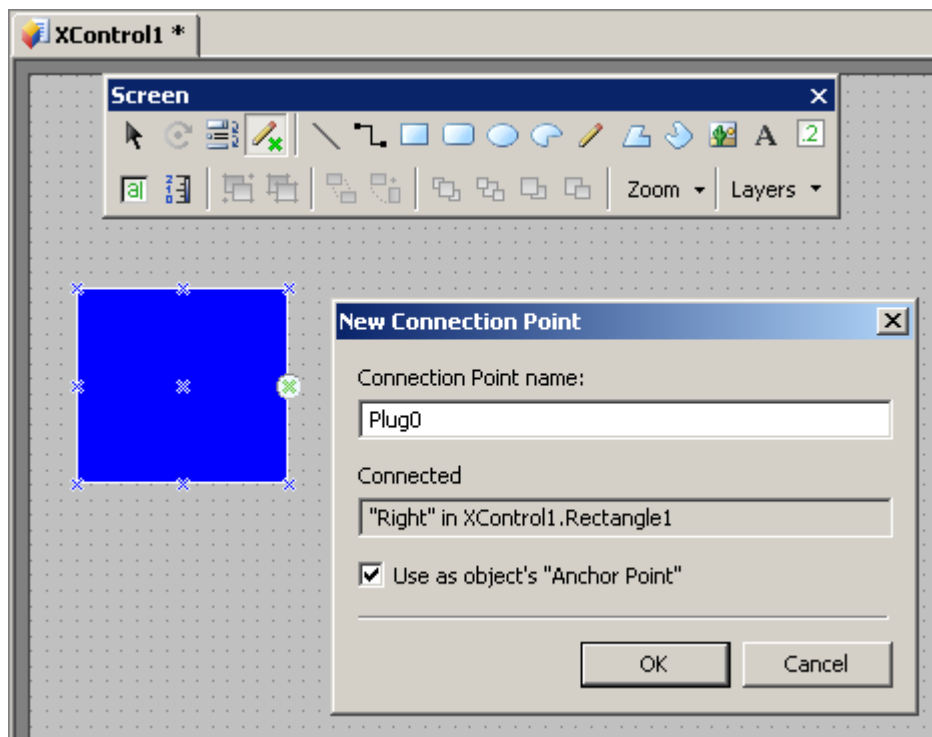
Editing Connection Points in XControls

- Changed color formatting in the EcoListCtrl, from hexadecimal to RGB. It was also improved color editing, allowing input of values in RGB or numbers.

15.1.10 OPC Client

- Created the **WriteFeedbackMode** property in the OPC Driver object. The behavior is similar to the I/O Driver, except in the case of asynchronous writings and the **WaitNextRead** and **TrustWriteSuccess** modes.

15.1.11 Other Implementations

- Reduced the basic memory usage of native Elipse E3 objects, meaning a general reduction of 5% of RAM memory used by **E3Run** at run time.

- The default **Elipse E3** grid control (EcoListCtrl) was prepared for better supporting of cut, copy, and paste operations of the configuration editor of **Elipse Power** objects.

- The elements of lists in the WatchWindow and DomainBrowser windows now are displayed in alphabetical order.

- Implemented a statistical log for REC connections and an individual statistical log of processes. Logs may have their frequency controlled by Windows Registry and may be completely shut down (frequency 0).

- SmartHeap (memory management library used by **Elipse E3**) has been updated from version 8 to version 9.01.

- Created an **E3GetActor** method in the Application Server object. This method returns the logon of the user who commanded the current **E3Run** operation. If **E3Run** is not currently handling an operation generated by another process, then returns "System". If there is no user logged on in the process which generated the current operation, then returns "Anonymous".

15.1.12 Playback

- E3Alarm and E3Playback now use the same icons to represent alarms: active (red), active acknowledged (red with a green check), inactive (yellow), inactive and acknowledged (green with a green check), and disabled (gray).

New alarm icons

- Improved the time for assembling Playback database. The queries which checked the amount of data available in each table were simplified to check only the date interval that the table contains. For a good performance, it is mandatory that all table have at least one index starting by the **E3TimeStamp** field.

15.1.13 Protection Device

- Added support to product keys of type **Softkey** (Hasp SL) in **Elipse E3**.
- Implemented new licenses in **Elipse E3** to allow **IHM**, **LITE**, and **Gateway** versions.
- The product key's access library (Hasp SRM) in **Elipse E3** was updated to version 5.10.
- Updated the installer of HKCustomer to version 5.3.

15.1.14 Query

- The default value of the **CursorLocation** property of a Query object was changed to **clClient**.

15.1.15 Remote Domains

- Improved logs for client Remote Domains, indicating time between retries and the name of the servers associated to each connection.
- Improved performance of **GetObject** method, when called from **Elipse E3 Viewer** or from Remote Domains.

15.1.16 Script Editor

- Added new global methods to **Elipse E3**, available on links and scripts: **E3Format**, **IIf**, **Choose**, **BShr**, **BShl**, **GetBit**, **SetBit**, **OPCIsGood**, **OPCIsUncertain**, **OPCIsBad**, **OPCGetLimit**, **OPCSetLimit**, **OPCGetSubStatus**, **OPCSetSubStatus**, **OPCGetQuality**, **OPCSetQuality**, **OPCGetVendor**, **OPCSetVendor**, **OPCMakeQuality**, and **GetComputerName**. The following methods are only available in scripts: **GetLocalTime**, **GetLocalTimeUTC**, and **GetCurrentWindowsUserName**.
- Added an optional parameter to the **AddObject** method to inform a name for the object.
- The Script Editor does not color expressions or word started by **REM** anymore.

15.1.17 Storage

- Storage has been revised and several improvements were implemented. Among them, a new log section in **Elipse E3** was created, called **Storage**, which allows debugging values that entered the Storage algorithm and which values were sent to the Database.
- A new field type has been added to Storage, **Integer**. Just like fields of type **Bit** and **Text**, the **Integer** fields are not submitted to the compressing algorithm of the Storage.

New Integer data type

- Now users can configure empty Storage objects (without fields) to allow querying data generated by other applications.

- A new parameter was added to Storage fields, **ScanTime**, in milliseconds. Therefore, the following changes were performed:

  - Added the **ScanTime** property (defined in milliseconds) to the StorageField object.

  - Added an optional parameter *ScanTime* to the **CreateNewSession** method of the Storage object.

  - Added an optional parameter *ScanTime* to the **AddField** method of the StorageSession object.

  - Three new attributes are available in the attribute reading query of the Storage, **Size** (10), **VARTYPE** (11), and **ScanTime** (12).

  - Added a new field in the "xxx_Fields" tables, **FieldScanTimeMs**.

  - Storage now simulates a scan of Tags which are not varying, feeding data to the compressing algorithm and making it to be sent to the database quickly (the simulated scan only starts after the Tag remains more than one minute without receiving any variation).

  - Storage now fills in records of **MaxRecTime** between two values in case the timestamp difference between them is greater than **MaxRecTime**.

  - A timer was created to flush after 2 (two) seconds the value which remains in cache in the timestamp filter of the Storage.

- Created two new methods in the field collection of the Storage. **AddField**, which adds a field to the collection, and **RemoveAll**, which removes all fields.

15.1.18 Users

- The *ActorID* parameter of several methods and events now assumes the current **Elipse E3 Viewer** user in case it is omitted. The affected methods are:
  - Alarm Server
    - **AckArea**
    - **AckAllAlarms**
    - **LogTrackingEvent**
  - Alarm Source
    - **Ack**
  - Power Command Unit
    - **Operate**
    - **Select**
    - **Cancel**
    - **DoAbort**
- The affected events are:
  - I/O Driver
    - **OnTagWrite**
  - OPC Driver
    - **OnTagWrite**
  - Power Command Unit
    - **OnOperateFinished**
    - **OnSelectFinished**
    - **OnCancelFinished**

- **OnSelect**
- **OnCancel**
- Power Configuration
  - **OnCommand**

15.1.19 Viewer

- Created two new methods in the Viewer object, **GetMouseX** and **GetMouseY**, to return the X and Y position of the mouse (referring to the whole computer screen), and two new methods in the Screen object, **FromPixelX** and **FromPixelY**, which convert values from Pixel to Himetric. Added a note in the description of the **GetMouseX** and **GetMouseY** methods of the Viewer object, alerting for script failures in situations where the current mouse position cannot be determined.
- Implemented in the Viewer object the **ViewerLanguageId** property, which informs the numerical code of the **Elipse E3 Viewer** language or **WebViewer** that is executing.

15.1.20 WebViewer

- Added the **URLToLoad** property in the **WebViewer**'s download ActiveX, which starts with "e3web2.asp" as the default value, and if it is changed by the user then loads, or navigate to, the new configured value. This property can be read and written.

15.2 Fixed Bugs

This section contains bugs fixed in version **3.5** of **Elipse E3**.

15.2.1 ActiveX

- Corrected a problem with a class registered by the user not showing on the list to be inserted in **Elipse E3**, nor showing any registry error message. For this, the window Add ActiveX was redesigned, aiming to make it easy to register new controls, as well as viewing the ones already loaded in **Elipse E3**. This window was renamed to ActiveX Control Configuration. *This bug occurred since v1.18.147.*
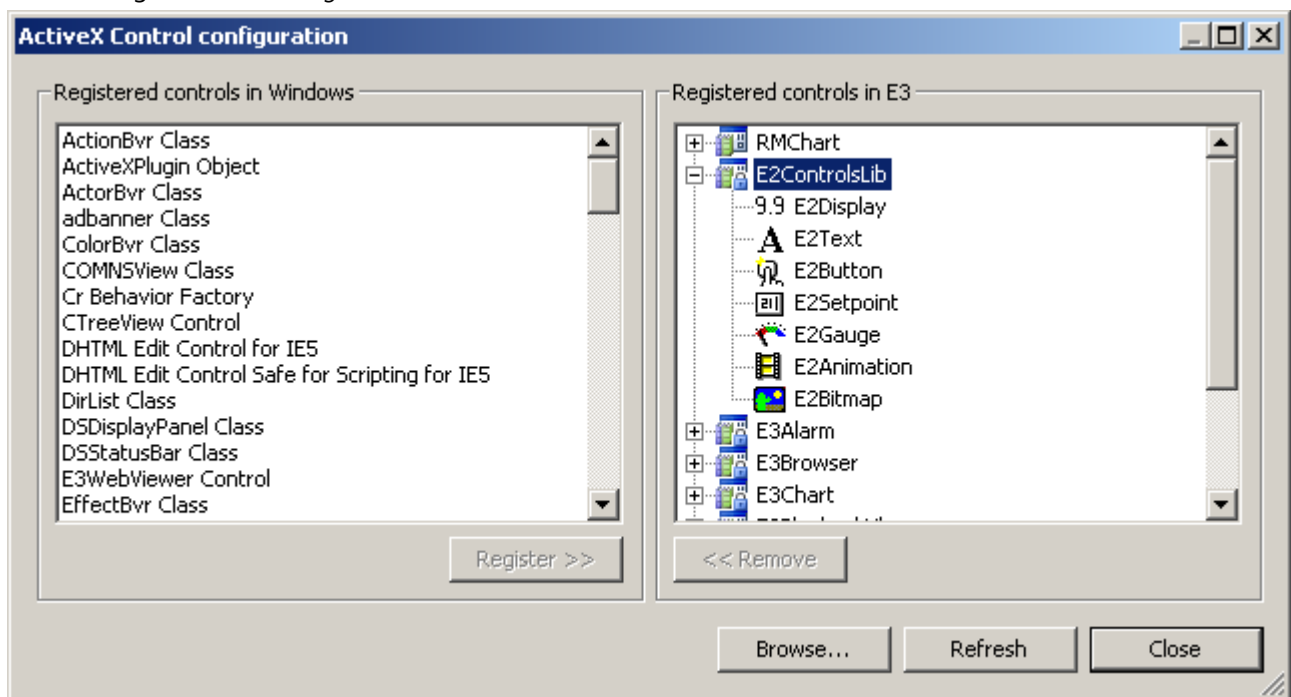
ActiveX Control Configuration window

15.2.2 Alarm Server and Alarm Configuration

- Corrected the behavior of the **ActiveNackAlarms** property, which remained in True when the Alarm Source object was disabled (property **AlarmVerify** equal to False), making the NACK counters of the Areas to remain incorrect. *This bug occurred since v3.2.90.*

15.2.3 AppBrowser

- Modified the behavior of the AppBrowser to not display folders of the container object, which appears repeatedly on top of the object tree. This avoids, in some cases, generating useless scripts at run time. *This bug occurred since v2.0.38.*

- Improved the behavior of the AppBrowser when generating script expressions for access to objects inside XObject definitions. Thus, it is not suggested anymore the access to other child of the XObject using expressions such as **Parent.Parent.Parent.Item()**, when could be simply used **XObject.Item("")**. *This bug occurred since v2.0.79.*

- Corrected the way the AppBrowser worked when used to select object for an ElipseX property. Now this mode takes into account the correct context of the object. Also, the object itself which contains the property does not appear in AppBrowser anymore. *This bug occurred since v2.0.38.*

- The **Paste** option of the AppBrowser now is disabled in cases where it is useless. Besides, properties and methods of folders do not appear anymore in cases where they are not supposed to appear. *This bug occurred since v2.0.38.*

15.2.4 Database

- Corrected a problem with the management of connections with SQL Server and Access database, which made valid Formula connections to be discarded, generating an excessive consumption of resources, and also preventing the **SaveFormulaValues** and **SetValueData** methods of the Formula object to work, and may lead to GPFs in the **E3Run** process. *This bug occurred since v3.2.217.*

- If a Database connection fails, now **Elipse E3** does not consume the database operation queue anymore, until connection is successful. In addition, any connection failure leads to using a reconnection policy, or waiting time. *This bug occurred since v1.18.147.*

- Corrected a failure in the processing of .e3i and .e3o files larger than 4 GB. *This bug occurred since v2.0.35.*

15.2.5 Demonstration Application

- Corrected texts and formatting of the **Elipse E3** Demonstration Application. The multi-language feature was extended to all Screens and scripts. *This bug occurred since v1.21.67.*

15.2.6 Documentation

- Corrected formatting and displaying problems with links in Elipse E3 documentation in PDF documents included in the **Downloads** section of **Elipse Software** website. *This bug occurred since v3.2.242.*

- Added a chapter in all **Elipse E3** manuals with search tips for CHM documents. *This bug occurred since v3.2.115.*

- Corrected the default value of the **EnableReadGrouping** property of the I/O Driver object in the item **Drivers - I/O Driver - Methods** on **Elipse E3 Reference and Scripts Manual**. The correct default value of this property is True. *This bug occurred since v2.0.135.*

- Corrected the examples of use of the **LoadFormulaValuesQuiet** method of Formula and Viewer objects on **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v1.22.30.*

- Added descriptions to the **RenameValue**, **SaveFormulaValues**, **SetUnitData**, and **SetValueData** methods of the Formula object on **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v3.2.140.*

- Corrected the description of the **Query** method of the Report object, to exclude the reference to the **SourceQuery** property, which is a private property of the Report. *This bug occurred since v1.20.418.*

- Corrected the description of the **AllowAckSelected** property of the E3Alarm object and the name of the chapter about User Libraries on **Elipse E3 Reference and Scripts Manual**, to match **Elipse E3 User's Manual**. *This bug occurred since v1.21.150.*

- Corrected example scripts of the **AddObject** method and the **Application** and **Links** properties, all from the chapter **Programming in Elipse E3**, on **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v3.2.151.*

- The **FillStyle** property now is described only in the properties of the Screen object, containing all values and restrictions for all Screen objects. *This bug occurred since v1.22.37.*

- Added descriptions for the **CommErrorBkColor**, **CommErrorText**, **CommErrorTextColor**, and **EnableCommError** properties of the Viewer object on **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v1.21.144.*

- Added to **Elipse E3 Reference and Scripts Manual** the description of the **nRetries** property of the Database object. *This bug occurred since v3.0.218.*

- Added the description of the **AboutBox** method of the E3Alarm object on **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v1.21.109.*

- Added the description of the **AboutBox** method of the E3Browser object on **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v1.21.109.*
- Added the description of the **Retentive** property of the Property object of an XObject on **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v3.2.151.*
- Added descriptions for several properties of the IOFolder, OPCGroup, DrawGroup, DynamicRotate, and XMethod objects, and also properties common to Screen objects. *This bug occurred since v3.2.140.*
- Added the value corresponding to the option of centering the window (2048) in the description of the *Flags* parameter of the **SetFrameOptions** method of the FrameSet object, on **Elipse E3 Reference and Scripts Manual**. *This bug occurred since v1.21.123.*
- Added a **Locate** button on the toolbar of CHM files, which allows locating the selected topic in the **Search** tab during a search. *This bug occurred since v3.2.131.*
- Replaced the figure displaying a Multiple Connection in the chapter **Links** of **Elipse E3 User's Manual**, to a more representative figure of this type of connection. *This bug occurred since v3.2.136.*
- Corrected the description of the functionality of the field **Ping Addresses to check network integrity**, which is not quit immediately when detecting network interface problems, but enter the **Standby** mode. *This bug occurred since v1.20.364.*
- Corrected the description of the animation options of menus in **Elipse E3 Studio** on **Elipse E3 User's Manual** to include the **Default** item, default for Windows, to differentiate from the **None** option, default for **Elipse E3**. *This bug occurred since v2.0.124.*
- Added direct links to events, methods, and properties on **Elipse E3 Reference and Scripts Manual** which are referenced on **Elipse E3 User's Manual**. *This bug occurred since v3.2.131.*
- Added information on **Elipse E3 User's Manual** about the need of a specific protection device license to use **Elipse E3** as an OPC server. *This bug occurred since v3.0.233.*
- Added a description of the procedures to enable ports on **Windows XP**, **Windows Vista**, and **Windows 7** Firewall on **Elipse E3 User's Manual**. *This bug occurred since v2.5.28.*
- Corrected the description of the item **Query Object** in the chapter **Reports** of **Elipse E3 User's Manual**. *This bug occurred since v1.20.418.*
- Corrected texts in several chapters of **Elipse E3 User's Manual**. *This bug occurred since v3.2.131.*
- Corrected the description of the measurement unit of the **MaxRecTime** column, in the chapter about **Storage Configuration** on **Elipse E3 User's Manual**. *This bug occurred since v1.21.135.*

15.2.7 Domain, E3 Server, and Hot-Standby

- Corrected a locking in the **E3 Server**, which could happen when using an asynchronous link creation in Remote Domains. *This bug occurred since v3.2.81.*
- Increased the limit of virtual memory of all **Elipse E3** processes, from 2GB to 4GB. This change specifically affects **E3 Admin**, **E3 Server**, I/O Server, and Viewer. *This bug occurred since v1.18.147.*
- Fixed GPFs that may occur in **E3 Server** when **Elipse E3 Viewers** called methods **IsUserMemberOfGroup** or **GetFullUserName**. *This bug occurred since v1.18.147.*
- Applications with several drivers no longer take a long time to start up. *This bug occurred since v3.5.180.*

15.2.8 Drivers and I/O Server

- Corrected a memory leak in the file Et32b.dll. This leak may affect any Driver working with lists of values, but it was noticed first on DNP3 Driver with callbacks enabled.
- The configured dead band in Block Elements now works. *This bug occurred since v1.18.147.*
- Corrected a memory leak of a few KB which occurred in **E3Run** and **Elipse E3 Studio** when a Driver was activated and deactivated. *This bug occurred since v1.18.147.*

15.2.9 E3 Admin

- Corrected a problem of displaying the same message twice when using a protection device with an expired license. *This bug occurred since v3.0.372.*
- Corrected the behavior of the item **Options** of the menu **Domain** in **E3 Admin**, which was always disabled in case of an **Elipse E3 Studio** license remotely borrowed. *This bug occurred since v3.0.348.*

15.2.10 E3 Tweak

- Included in **E3 Tweak** an option to control the module **IOServer** in the log section **Track**. *This bug occurred since v3.1.32.*
- Corrected the path of the registry key displayed in **E3 Tweak** interface on 64-bit operating systems. *This bug occurred since v3.0.30.*
- Now **E3 Tweak** considers the range of values of type **DWord** when editing items of numeric type. *This bug occurred since v3.2.196.*
- Corrected a problem when validating numeric values which occurred in cases where a value outside the default range was used to indicate that the item is disabled. *This bug occurred since v3.2.196.*
- Corrected problems on the registry key description and creation of the item **Filter enabling**, the **COMFilter** option, of **E3 Tweak**. *This bug occurred since v3.1.30.*

15.2.11 E3Alarm

- In the property window of E3Alarm, the combo box to select the Alarm Server was replaced by an edit box with a button to open the AppBrowser, thus avoiding a problem with viewing Alarm Servers which were created inside several nested folders. *This bug occurred since v1.22.13.*

15.2.12 E3Chart

- Because of performance issues, dotted Pens with width 1 (one) are now drawn the same way as Pens with width zero. *This bug occurred since v3.2.68.*
- Fixed a problem causing a real time part of a Real Time & Historic Pen not displaying if the historic part query was incorrectly set. *This bug occurred since v3.1.189.*
- Fixed a problem when using complex field names in Storage fields with E3Chart Pens. *This bug occurred since v2.5.15.*
- Fixed a GPF in Historic Pen expressions. *This bug occurred since v3.2.89.*
- Fixed a problem in E3Chart causing the historic part of a Real-Time Pen to be plotted in certain configuration combinations. *This bug occurred since v3.1.189.*
- Starting an E3Chart query is now asynchronous, avoiding **Elipse E3 Viewer** locks in case a Database connection is slow. *This bug occurred since v1.19.87.*

15.2.13 ElipseX Libraries

- Corrected a problem with indirect links among ElipseX properties of type **Object**, which may not connect, depending on the order in which the properties were declared. *This bug occurred since v1.20.282.*
- Corrected the connection of links in ElipseX properties which referenced other properties of type **Link** of the same ElipseX. *This bug occurred since v1.22.60.*

15.2.14 Expressions

- Corrected the behavior of the operators >= (greater or equal than) and <= (less or equal than) in **Elipse E3** expressions, which returned 1 (one) instead of -1 (minus one). *This bug occurred since v2.5.93.*

15.2.15 Installation

- Added the Release Notes file in Spanish in the installation e3full-x86-esn.exe. *This bug occurred since v3.2.242.*
- Corrected Spanish translation problems in E3Alarm and Alarm Server objects, and in **Elipse E3 Studio**.
- Tested the compatibility of RMChart with Internet Explorer 6, 7, and 8. In IE8 there is a workaround: Access the option **Tools - Internet Options**. In the **Advanced** tab, section **Security**, uncheck the option **Enable memory protection to help mitigate online attacks**. After restarting IE8, a **WebViewer** with an RMChart is correctly loaded.
- Corrected a problem in the installers, which caused a rollback in the installation when the files ped.exe, scrwiz.dll, ped.hlp, htmlr000.htm, htmlref2.htm, index.htm, and vbsref.htm were not present during the configuration of the Microsoft ActiveX Control Pad component. *This bug occurred since v3.0.268.*

15.2.16 Interface

- Corrected the positioning of the editor of **Variant** values in cells of default **Elipse E3 Studio** spreadsheets, which was overlapping the icon identifying a data type. *This bug occurred since v1.18.147.*
- Corrected the behavior of windows with the message **Do not show this warning again**, when this warning was displayed again even when the check box was checked. *This bug occurred since v3.2.49.*

- Blocked the opening of selection boxes in read-only cells of editing spreadsheets inside **Elipse E3**. *This bug occurred since v3.2.128.*
- Changed the messages of the amount of licenses in the **E3 Admin** window to agree with singular and plural forms, and simplified the messages in case of no licenses. *This bug occurred since v1.18.147.*

15.2.17 Links
- Corrected a problem which occurred when a row in a Multiple Link was created at run time and the Link of that row got a bad quality. *This bug occurred since v3.2.85.*
- Corrected a GPF which may occur during the handling of reentrant variations of Links. *This bug occurred since v1.18.147.*
- Improved failure logs of sending Link events from **E3Run** to **E3 Server**, as well as improved the logic of quitting in case of repetitive failures. *This bug occurred since v1.18.147.*
- Corrected a problem with Links using Local Aliases which were not reconnecting correctly. Now, Links which use Local Aliases and are created disconnected, behave as Links which were created connected, that is, they are created and maintained without considering the Domain as part of their path. *This bug occurred since v3.1.203.*

15.2.18 OPC Driver
- Corrected the behavior of the **OnTagWrite** event of an OPC Driver, which was not generated when performing asynchronous writings if the communication with the server used the OPC DA 1.0 standard, or if the asynchronous writings failed immediately. *This bug occurred since v3.2.95.*

15.2.19 Other Corrections
- The loading or closing time of very large applications, which have many objects in the same folder, was greatly improved. *This bug occurred since v1.18.147.*
- Corrected a translation problem in **Elipse E3 Studio**, from "Covert to symbol" to "Convert to symbol".

15.2.20 Remote Domains
- Improved the limit time and implemented a heartbeat during the REC connection of Remote Domains and Hot-Standby, as well as improved the limit time of connection of **Elipse E3 Studio** with **E3 Server**. This corrects a problem with the Client Domain not reconnecting to the Server after several disconnections, due to network problems.
- Corrected a problem in reconnecting Remote Domains when the Client Remote Domain delayed several minutes to update or start the Domain. *This bug occurred since v3.0.201.*
- Corrected a problem in the threads for reconnecting and sending data from Remote Domain clients, to ignore Windows message floods, which makes the Client Remote Domain to fail on reconnection. *This bug occurred since v3.0.201.*
- **E3 Server** no longer hangs when there are too many accesses to a Remote Domain from which alarms are viewed. *This bug occurred since v3.0.201.*
- Improved the performance of the **GetObject** method when called by a **Elipse E3 Viewer** or by Remote Domains.
- Revised the management of alarm subscription connections in **E3 Server**, fixing failures (GPFs) and increasing asynchronous operations. *This bug occurred since v3.1.68.*

15.2.21 Reports
- Fixed the behavior of the progress window of Reports, which may cause problems on **Elipse E3 Viewer**'s modal windows. *This bug occurred since v2.0.91.*
- Fixed E3Chart's behavior, which was displayed empty when printed isolated on a Report page. *This bug occurred since v1.22.1.*

15.2.22 Script Editor
- Corrected a problem when enabling or disabling texts in the window for editing user events via the Link Editing window. *This bug occurred since v3.2.46.*
- Corrected the appearance of the calendar opened by the **ShowDatePicker** method in computers with a changed screen DPI. The screen appeared truncated, displaying only days from Sunday to Thursday.
- Corrected a bug in the Search and Replace tool of the Script Editor, which returned odd results when there were empty rows adjacent to the rows containing the text searched. *This bug occurred since v3.1.5.*

- Corrected a problem in the Search and Replace tool of the Script Editor, which counted as replaced the texts found at the first and last rows of the script, which cannot be modified. *This bug occurred since v2.5.110.*
- Corrected leaks in the USER and GDI objects in **Elipse E3 Studio** when using the Search and Replace window of the Script Editor. *This bug occurred since v2.5.94.*

15.2.23 Storage

- Now users can manually add data, using **Storage.CreateNewSession**, to a Storage object without configured fields. *This bug occurred since v2.5.102.*
- The compression algorithm of the Storage now discards consecutive data which have the same timestamp, using only the last value of a sequence of values with the same timestamp. *This bug occurred since v1.20.354.*
- Corrected the behavior of **MinRecTime** in the compression algorithm of the Storage, which in certain situations was recording data without respecting the time configured in **MinRecTime**. *This bug occurred since v1.20.192.*
- Corrected a problem in the compression algorithm of the Storage which made the linking record of **MaxRecTime** not being recorded in some situations, or recording two records when reaching **MaxRecTime** instead of one. *This bug occurred since v2.5.102.*
- Corrected a problem in the **SampledData** Query of the Storage which failed if at least one of the Query Tags had duplicated data, more than one value at the same timestamp, at the beginning of the Query period, or at the end of the period. *This bug occurred since v3.0.150.*
- Corrected a problem in the compression algorithm of the Storage, which made the linking record of **MaxRecTime** being generated with an incorrect timestamp in certain situations, may leading to incorrect data interpolations. *This bug occurred since v2.5.102.*
- Corrected a problem in the Storage, which lead to a failure when creating tables with more than 100 fields in Access databases. *This bug occurred since v1.21.43.*
- Corrected a problem which deleted Storage fields in the database if there were duplicated fields in the Storage configuration. *This bug occurred since v1.21.43.*
- Performed several improvements in the Storage to avoid creating duplicated fields in the database, or preventing duplicated data to be recorded in a Storage field. Logs generated by the Storage were improved to provide a more accurate diagnosis of configuration errors and problems found at run time. *This bug occurred since v1.21.43.*
- Corrected a problem when updating Stored Procedures used by the Storage in SQL Server, which were always deleted and recreated as soon as the Database Server was activated, which could lead to problems on queries from other Database Servers using the same database. *This bug occurred since v1.21.26.*
- Fixed a problem occurring when Storage was executed with more fields than the available licenses, which lead the first field of each table to be erased, and the last field to be duplicated. *This bug occurred since v3.5.285.*

15.2.24 Studio

- The Domain Checker now performs a name consistency for Database Servers and the table of the Alarm Server object. *This bug occurred since v1.18.147.*
- Added support for Undo operations when changes are performed through the **Replace** tool. *This bug occurred since v1.20.382.*
- Corrected a problem with searching or replacing properties of type Color, where a value inside the color were found and replaced, which would change the final color of the property. For that, the behavior of the search and replace tool was modified to identify the data type of the search: **String**, **Date**, **Color**, **Boolean**, or **Number**. *This bug occurred since v1.20.382.*
- Corrected a message of insufficient memory displayed in **Elipse E3 Studio** when Search or Replace is performed in objects which cannot be loaded. *This bug occurred since v1.20.263.*
- Corrected a problem in **Elipse E3 Studio** when replacing values in fields already deleted, which may lead to a GPF. *This bug occurred since v1.21.80.*
- Fixed a problem which caused **Elipse E3 Studio** to unexpectedly quit when pressing ESC in the Filter Class Configuration window of Importing and Exporting objects to CSV (**Export - Advanced - Filters - Change**). *This bug occurred since v2.5.63.*
- Corrected a memory leak in Pick objects. *This bug occurred since v1.20.22.*
- Corrected a problem when mirroring Arc objects when they are already rotated. The drawing of the Arc rotated and mirrored now is correct. *This bug occurred since v1.18.147.*
- Corrected a GPF in **Elipse E3 Studio** when displaying the Property List or the Link window and the name of an ElipseX property is a special character, such as a Greek letter). *This bug occurred since v1.18.147.*

- Now **Elipse E3 Studio** asks users if they want to save an unsaved application when Windows is restarted or shut down, or when users log off. *This bug occurred since v1.18.147.*
- Corrected a GPF which occurred in **Elipse E3 Studio** when trying to convert a very complex metafile (WMF or EMF file) to a symbol. The conversion process was also improved, which could take seconds, now is nearly instantaneous. *This bug occurred since v1.18.147.*
- Corrected a problem which occurred in windows which allowed moving Splitters. The cursor icon remained the default, while it was supposed to change to horizontal and vertical arrows. *This bug occurred since v3.1.1.*
- Fixed a GPF (stack overflow) which occurred in **Elipse E3 Studio** when a large number of objects, such as 5000, of a Screen were selected at the same time. *This bug occurred since v1.18.147.*
- The file msstkprp.dll now is installed and registered in the **System32** Windows directory. The **Font** and **Color** tabs of E3Alarm, E3Chart, and E3Browser objects rely on this file. *This bug occurred since v1.18.147.*
- Corrected a problem when double-clicking values of type Enum in the Property List. In this case, double-clicking was not changing the following value if the numbers were not continuous. *This bug occurred since v1.18.147.*
- Corrected the behavior of auto-incrementing names of **Elipse E3 Studio** spreadsheets in several locations where names are not supposed to differentiate upper from lower case. *This bug occurred since v1.18.147.*
- Fixed a problem in **Elipse E3**'s Screen Editor in point editing of Polyline or PolyBezier objects. The operation of creating points was not being undone. *This bug occurred since v1.18.147.*

15.2.25 Viewer
- Corrected a problem in the **Application.ESign** method, which did not work if called by certain events (for example, **ComboBox.Change**) on a non-modal screen. *This bug occurred since v1.20.394.*
- Corrected a problem in the **Application.ShowDatePicker** method, which did not work if called by certain events (for example, **ComboBox.Change**) on non-modal screens. *This bug occurred since v1.20.65.*
- Corrected the **ShowDatePicker** and **ShowPickColor** methods to use omitted parameters instead of -1 (minus one) to indicate window coordinates. Negative values may be valid as coordinates in case of more than one monitor. *This bug occurred since v1.20.65.*
- Corrected a memory and handle leaks which occurred at each disconnection on a REC client. *This bug occurred since v2.5.135.*
- Corrected a problem which may lead **E3 Server** to cancel a **Elipse E3 Viewer** or **WebViewer** connection during or after a very large download. Implemented new options in Windows Registry to configure the **ping** that **E3 Server** sends to clients trying to connect to it. **PingRetries** indicates the amount of retries and **PingRequired** indicates if it is mandatory that the client answers the **ping**. *This bug occurred since v3.0.303.*
- Corrected a problem with the returned value of the **Viewer.ChangePassword** method, which was returning False even when the operation was successfully performed. *This bug occurred since v3.0.115.*

15.2.26 WebViewer
- Modified the behavior of E3Downloader to:
  1. Not install or reinstall **WebViewer** when there is another Elipse E3 installed, such as **Full** or **Viewer**.
  2. Not install or reinstall **WebViewer** if the current version is equal or greater than the one in the server.
  3. Avoid downloading the installer when there is no need to install **WebViewer**. *This bug occurred since v1.20.319.*

16 Version 3.2

This section contains updates of version **3.2** of **Elipse E3**. Please check the next topics for more information about **new features** and **fixed bugs** in this version.

16.1 New Features

This section contains new implementations in version **3.2** of **Elipse E3**.

16.1.1 Alarms

- E3Alarm's **Colors** tab was redesigned to allow new settings. Now, in addition to color configuration for inactive and acknowledged alarms, users can also configure colors for text, background, foreground, and blinking options for each different severity type inside an alarm. Users can also preview how these settings look like at run time.
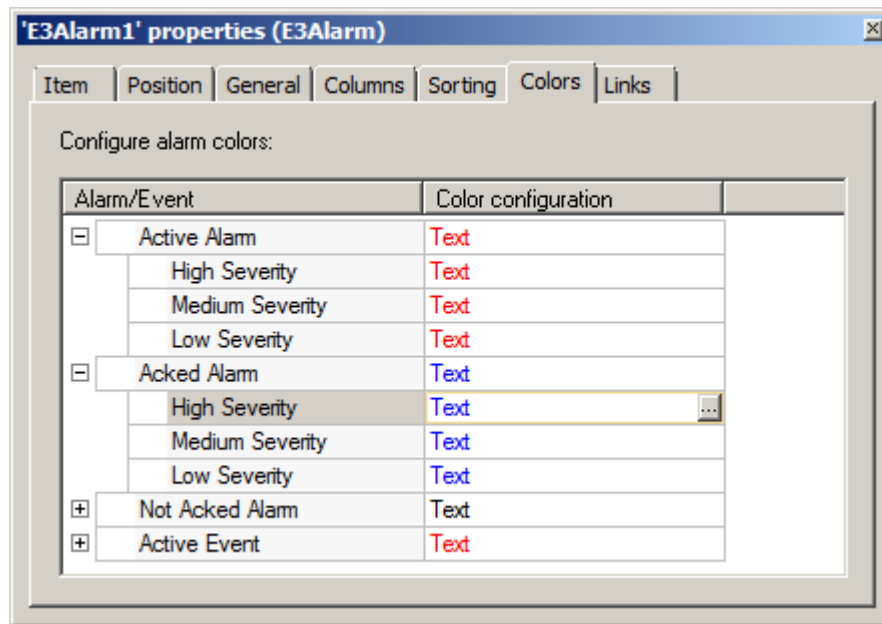
E3Alarm's Colors tab

- New methods were added to provide alarm acknowledgement via scripts: **AckSelected**, to acknowledge the selected alarm; **AckCurrentFilter**, to acknowledge all alarms of the current filter; and **AckAll**, to acknowledge all alarms. Check a sample application at *https://kb.elipse.com.br/alarms-acknowledgement-via-scripts/*.

16.1.2 Drivers and I/O Server

- Implemented a *WatchDog* mechanism to monitor I/O Server's work. If a Driver causes a Server hanging for more than one minute, the process is automatically destroyed, thus avoiding **E3Run** hanging (a message with error E00501 is then logged).

16.1.3 E3Chart

- E3Chart's **Pens** tab was redesigned to facilitate Pen edition. Now, Pens are visualized in a table, which also show their main properties. These properties can be edited directly on the table, for multiple Pens at once. On **Style** column, users can visualize how a Pen is drawn at run time.
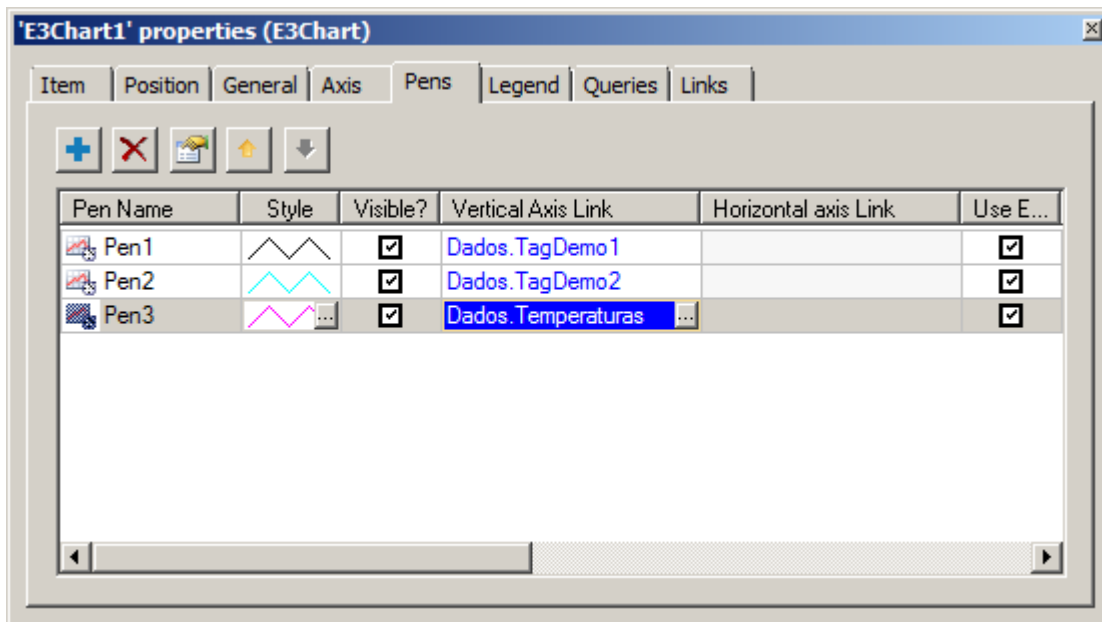
E3Chart's Pens tab

- Users can now use the **Search/Replace** tool in Pen's properties. Users can also copy and paste Pens inside the same E3Chart, or among E3Charts.

- New properties were added to E3Chart: **ShowPopupMenu**, to set whether E3Chart's default menu are displayed when users right-click a chart; **MouseMode**, to control mouse mode via scripts: **Zoom**, **Pan**, **PanH**, **Search**, and **Cursors**; and **Padding**, to set the width of the padding between E3Chart's internal and control edges. Check a sample application at *https://kb.elipse.com.br/e3charts-new-properties-e3-v-3-2/*.

- A new method was added to E3Chart's Pens and Pen Collections, **SetCursorPos**, to set each Pen's cursor in E3Chart.

- Another new Pens' method is **GetPoint**, which returns both X and Y coordinates of the point closest to the input value. In addition, Real Time Pens now have the option to show or hide bad quality points (**ShowBadPoints**). This option, which was previously configured only via scripts, is now also available on the Pen's properties window.

- A new, optional parameter was added to Pens' **AddPoint** method to indicate the quality of the inserted point.

16.1.4 E3 Tweak

- **E3 Tweak**'s interface was redesigned to display Windows registry's changes in a clearer and more practical way. It also now validates keys' maximum and minimum values.
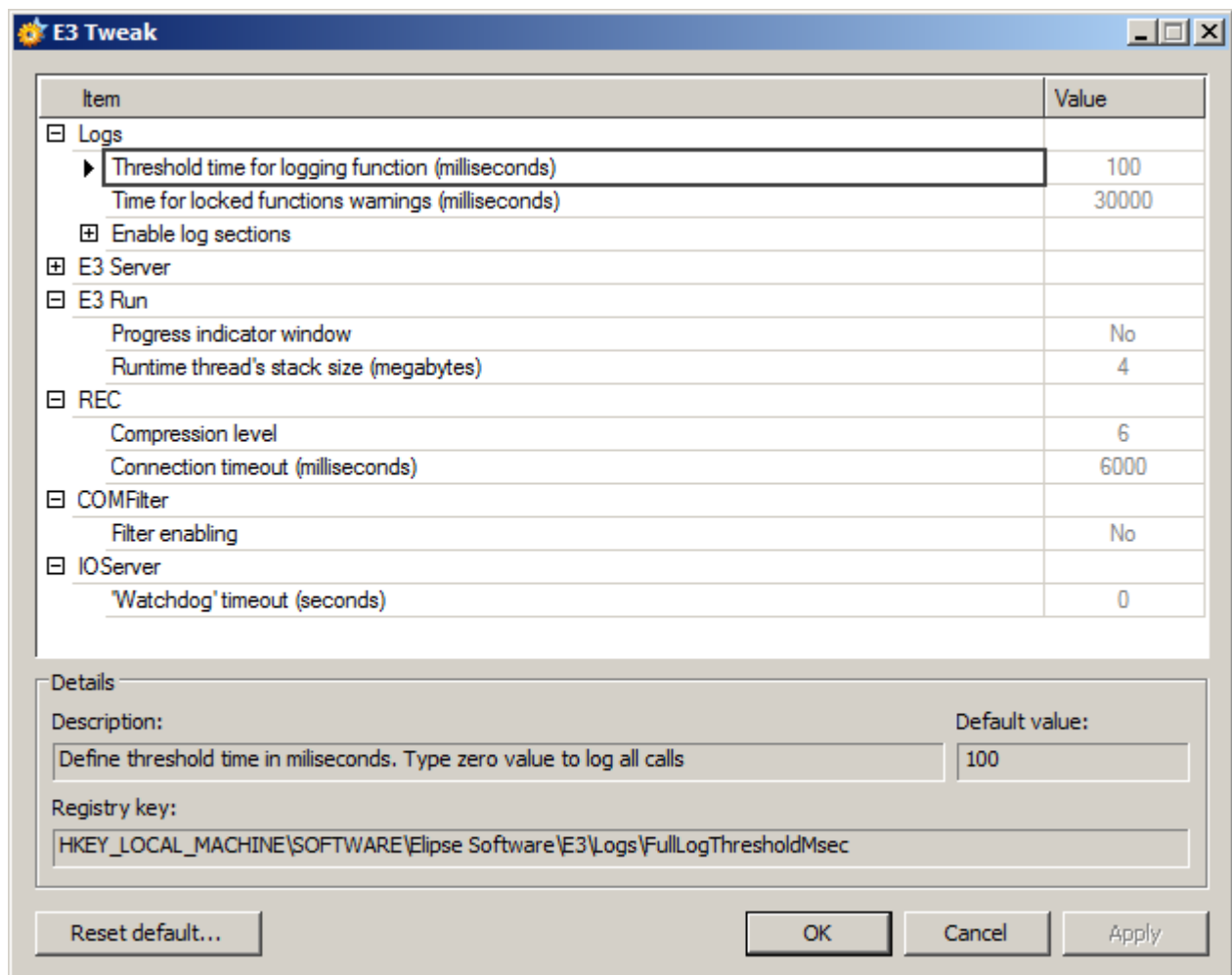
E3 Tweak

- **E3 Tweak** also presents new options to configure I/O Server's WatchDog time (the maximum duration before a call to I/O Server is considered stalled, **StallTimeoutSec**), and to enable the following **Full** log sessions: **StandbyAlgorithm**, **EventQueue**, **ServerLinkManager**, **ServerControl**, and **RemoteDomain**.

16.1.5 ElipseX Libraries

- Created a **CustomConfig** event for ElipseX objects. This event is called inside **Elipse E3 Studio** by ElipseX's instances' contextual menu. The menu text is configured in ElipseX's **CustomConfigText** property. Check a sample application at *https://kb.elipse.com.br/customconfig-de-objetos-elipsex/*.

- XObjects' properties can now be set as retentive.

16.1.6 Interface

- There are several new improvements in **Elipse E3**'s interface for version 3.2. First, all icons were reviewed and updated, which makes its interface clearer, with 24-bit colors. In addition, windows' alignment and internal spacing now follow Microsoft's standards.
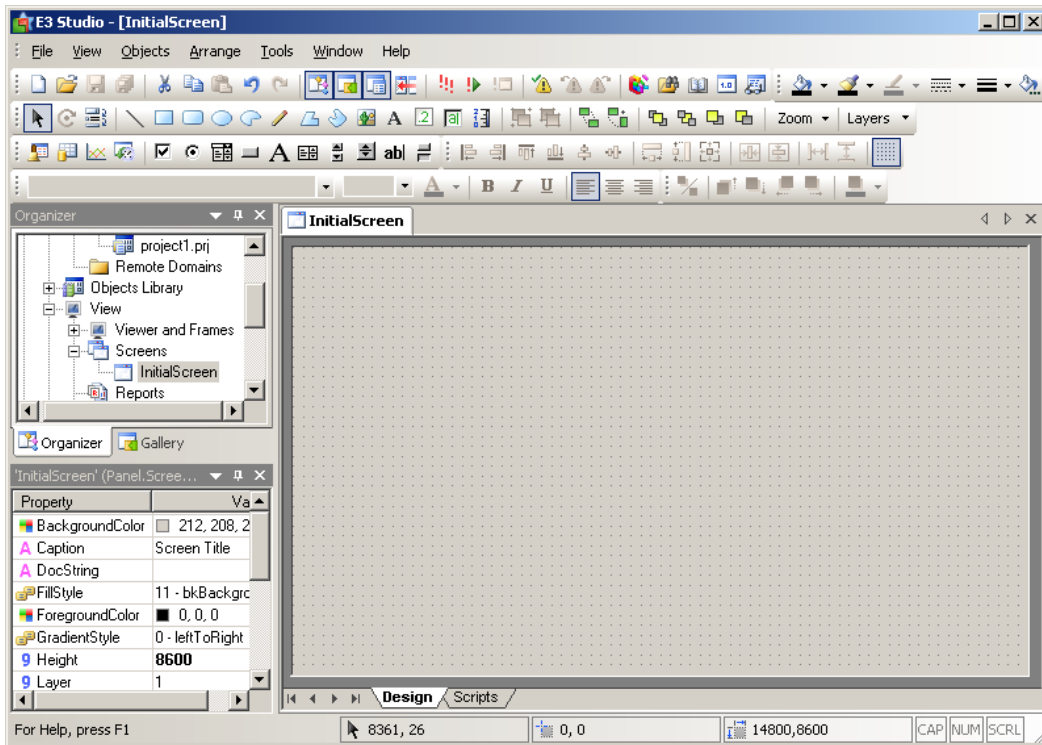
New Icons

- Properties Window's **Links** tab and Links Edition window now have new icons to identify link type, which makes the task of creating links more intuitive.
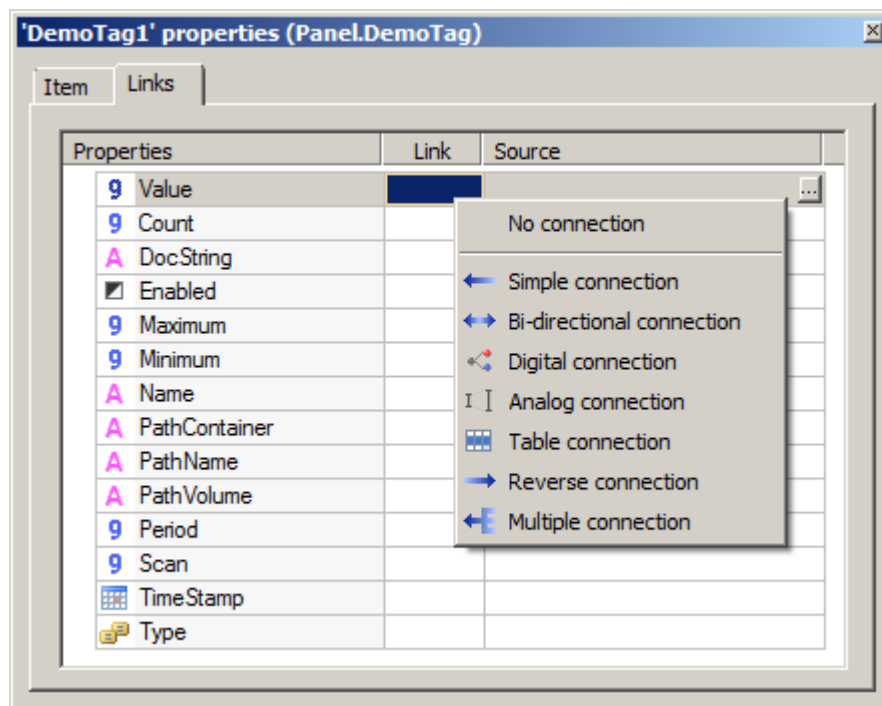
Icons

- In **Elipse E3 Studio**, all read-only cells have a slightly darker background. This makes it easier for users to identify which columns or properties are not enabled for editing.

- A new shortcut (F2) was created to edit a DrawString text selected on screen. This shortcut also works for objects with **Caption** or **Value** properties; in such cases, editing is performed on Properties List.

- On Properties List, there is a new icon for properties containing a file path to an image (for example, **Screen.PictureFile** and **DrawPicture.FileName**). Unlike previous versions, this icon clearly describes an image, not a text.

16.1.7 Links

- Created a new type of Link, **Multiple connection**. With this Link, you can specify multiple sources, selected according to the main source's numerical value.
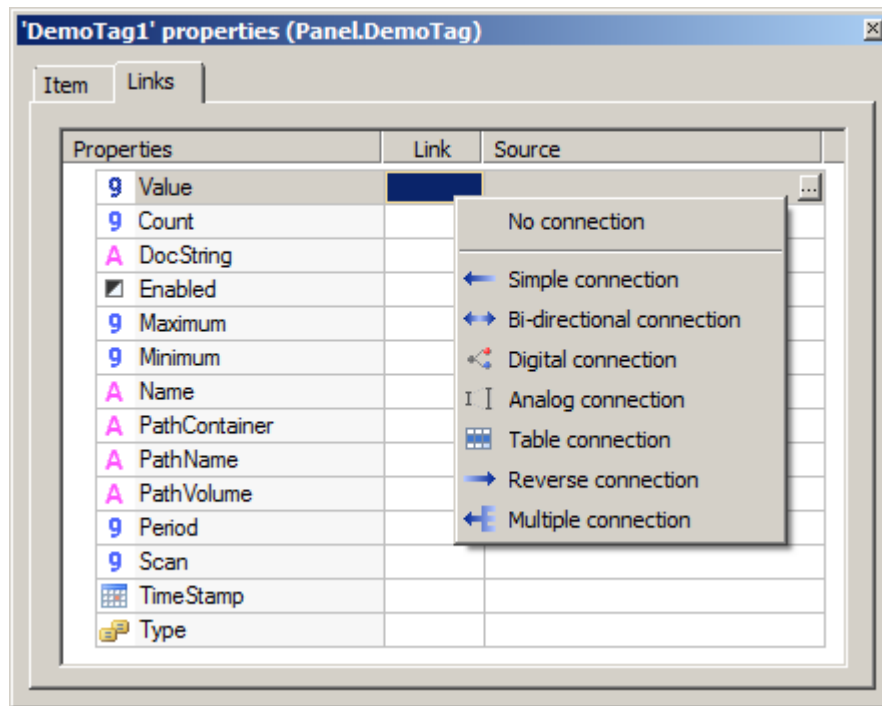
Multiple Connection

16.1.8 OPC Client

- Two new events were implemented in an OPC Driver object, **OnTagRead** and **OnTagWrite**. Event generation is controlled in each OPC Tag by the **EnableDriverEvent** property. In addition, logs were added to the OPC Client's external calls to detect OPC Server's hanging. These messages are generated in logs' **Full** section, in **Studio** and **E3Runtime** modules.

16.1.9 Other Implementations

- All **Elipse E3** manuals and **Elipse E3**-related products manuals (**E3 Tweak**, **Elipse Event Log Viewer**) are now presented in CHM format, lighter and more practical, allowing easy access by using a hierarchical structure. Furthermore, all manuals are linked to each other, making it easy to search for information in all different manuals supplied by **Elipse Software**.

- **Elipse E3 Reference and Scripts Manual** was redesigned: its chapters are now object-oriented, organized in the same sequence as **Elipse E3 User's Manual**, and each object is presented alongside its own events, methods, and properties.

- **Full** logs were added to some Domain calls and objects in the Database (**AdoRowset** and **ADORecordSet**), which can run in the server and be accessed via Viewer Scripts.

- The **IOKit** installed alongside **Elipse E3** has been updated to version 1.15.

- The digital certification used for installers and other binary files (EXE, OCX, DLL, etc.) in **Elipse E3** was updated. It is now valid until September 13th, 2010.

- **Elipse E3** version 3.2 brings **Elipse Event Log** new version, 3.0. It has been greatly improved, especially concerning graphical interface usability:

  - **Elipse Event Log Viewer**: allows users to insert bookmarks in events, sort events out per fields, and save filter configurations of each log file. Furthermore, date visualization is now always on the time zone of the place where the file was generated

 - **Elipse Event Log Export**: users can now choose event fields to be decoded during export

16.1.10 Playback

- A new tool, called **Instant Chart**, was implemented in E3Playback to display a Tag's value directly on the Timeline. This tool allows users to track a Tag value's variation in a fast, practical way. Check a sample application at *https://kb.elipse.com.br/grafico-instantaneo-no-e3playback/.*
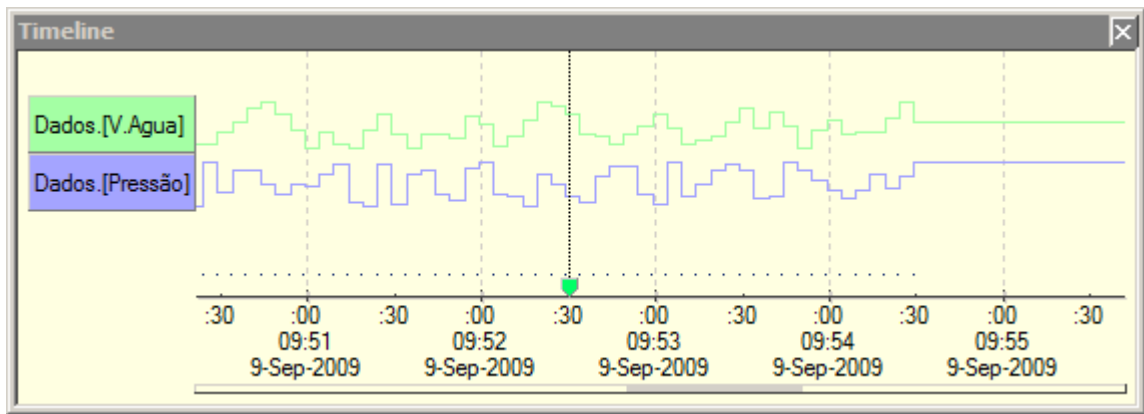
Instant Chart

- The video recording tool has been improved, and now it also allows users to record audio and mouse pointer.

- E3Playback now comes with **Bookmarks**, which allow users to pinpoint certain events on the Timeline and define marks to outline these events. The Timeline will display all user-created Bookmarks.
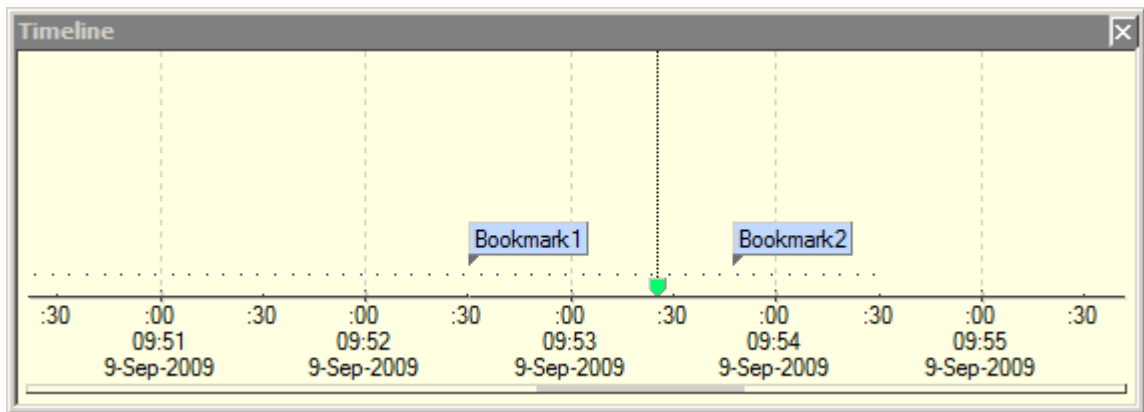

Bookmarks

- The colors on the window displaying the Timeline were changed to make it clearer, more attractive.

16.1.11 Remote Domains

- On Remote Domains settings window (**Options** - **Remote Domains**), now there is a button labeled **Advanced**, which allows users to set each Remote Domain's connection parameters. There, users can configure connection timeout, **ping**, and heartbeat, as well as set if link creation in the Remote Domain is asynchronous.
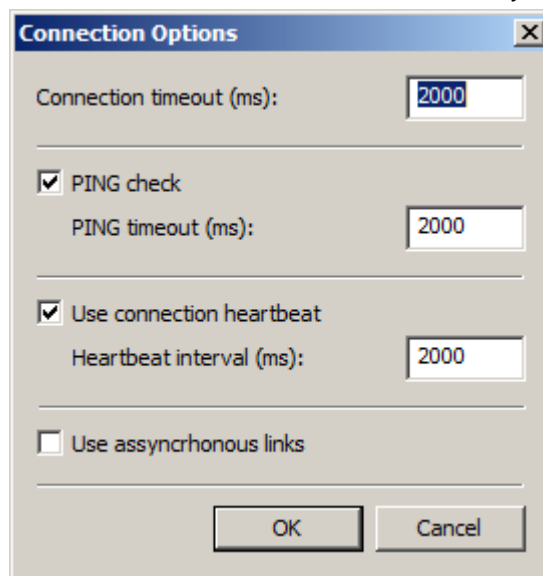
Advanced settings

- Now, the localhost address, or any other resolving as the loopback IP (*127.0.0.1*), also works so that a Remote Domain can be considered as a local alias.

16.1.12 Scripts

- Created an Application object for Studio scripts. Currently, this object has only one method, **GetObject**, which returns a Domain object executing in the server.

- The **GetChildObject** method was added to all **Elipse E3** objects, and it retrieves child objects from paths relative to the current object.

16.1.13 Viewer

- New properties were added to the Viewer object, which allow users to set the default behavior of windows created by this object: **WindowBorder**, **WindowResizable**, **WindowMovable**, **WindowStayOnTop**, and **WindowSmallTitle**.
- Furthermore, a new method was added to the FrameSet object, **SetDisableTaskSwitching**, which enables or disables Viewer's task switching at run time.

16.2 Fixed Bugs

This section contains bugs fixed in version **3.2** of **Elipse E3**.

16.2.1 Alarm Server and Alarm Configuration

- Fixed a bug when closing the Domain or deactivating the Alarm Server, which eventually lead to losing some alarm messages (up to 99) that had not been recorded in the database yet. For more information, please refer to *https://kb.elipse.com.br/bug0010182-some-alarms-may-not-be-recorded-in-the-database/. This bug occurred since v1.18.147 (or earlier).*
- Fixed a bug that could cause Viewer script errors after **Deactivate** method call, in reference to an Alarm Server object. For more information, please refer to *https://kb.elipse.com.br/bug0010183-error-in-a-viewers-script-after-alarmservers-deactivate-method-has-been-called/. This bug occurred since v1.21.96.*
- Fixed Alarm Summary's behavior when the Domain stops. Previously, the Summary was erased whenever the Domain stopped (without closing it). Now, Summary messages are only erased if the Domain is closed. For more information, please refer to *https://kb.elipse.com.br/bug0010196-alarm-messages-are-removed-from-e3alarm-when-domain-stops/. This bug occurred since v1.21.96.*
- Now, when deactivating and then reactivating the Alarm Server at run time, the Alarm Summary hides (when deactivating) and reappears (when reactivating). No message is logged to the database during this process. For more information, please refer to *https://kb.elipse.com.br/bug0008263-apos-a-desativacao-do-objeto-alarmserver-o-objeto-e3alarms-nao-mostra-mais-nenhum-alarme/. This bug occurred since v1.18.147.*
- Fixed E3 Alarm's behavior, which allowed an alarm message to remain active in the Summary if the related Alarm Source was disabled (**AlarmVerify** = False) via Studio, and later the Domain was updated. Now,when updating the Domain, this message is removed from the Summary, and a message with **Enabled** = 0 is logged to the database. For more information, please refer to *https://kb.elipse.com.br/bug0010260-alarm-message-remains-in-the-summary-if-alarmsource-is-disabled-in-e3-studio/. This bug occurred since v1.21.96.*
- Now alarms are only checked after Alarm Config's complete activation, which happens after the execution of **OnStartRunning** scripts and Link creation. This allows alarms to be completely reconfigured during application activation (or during some object's reactivation via **Activate** method), which includes renaming areas, enabling or disabling alarm acknowledgment, changing verification limits, etc. For more information, please refer to *https://kb.elipse.com.br/bug0002873-areas-name-cannot-be-changed-at-runtime/. This bug occurred since v1.20.242.*
- The alarm's acknowledgment status is no longer lost when the Alarm Source restarts (either by refreshing the Domain, or by using **Deactivate** or **Activate** commands). For more information, please refer to *https://kb.elipse.com.br/bug0009880-active-alarms-need-to-be-reacknowledged-when-domain-is-updated/. This bug occurred since v1.21.96.*

16.2.2 AppBrowser

- Removed prefixes (such as "v", "bstr", "str", "vb", "p", "var", "va", "d", "i", "l") from names of **Elipse E3**'s methods and properties parameters.

16.2.3 Data Server

- Fixed a bug that caused a Timer Tag's **OnPreset** event set as a daily trigger (**TriggerType** = ttDaily) to be called just once. For more information, please refer to *https://kb.elipse.com.br/bug0009969-tagtimer-not-executing-onpreset-event-if-triggertype-property-is-set-as-ttdaily/. This bug occurred since v3.0.122.*
- Fixed a bug that caused a Counter Tag to sometimes skip numbers (for example 1, 2, 3, 3, 5). For more information, please refer to *https://kb.elipse.com.br/bug0010248-counter-tags-may-skip-numbers/. This bug occurred since v3.0.137.*
- Fixed Internal Tag's behavior, which propagated changes in **Quality** property before updating **TimeStamp** property when receiving a new value either via Link or via **WriteEx** method. For more information, please refer to

https://kb.elipse.com.br/bug0010635-internaltag-object-propagates-quality-property-before-updating-timestamp/. This bug occurred since v1.21.96.

- Fixed an **E3Run** hanging when a connection to an Oracle database is down while a query to the same database is executing. *This bug occurred since v1.18.147 (or earlier).*

16.2.4 Database

- Changed text value formatting in SQL code generated for MS SQL Server, to support Unicode characters correctly.
- Now a Database inserted into an XObject works properly at run time. *This bug occurred since v1.21.96.*

16.2.5 Domain, E3 Server, and Hot-Standby

- Fixed a potential **E3 Server**'s glitch when an I/O Server is unexpectedly terminated. *This bug occurred since v3.0.359.*
- Fixed retentive Tag's implementation, which handled Tag's name as case-sensitive and caused a Tag renamed from "tag" to "TAG" to lose its retentive value. *This bug occurred since v1.21.96.*
- Fixed a bug that occurred if an object was attributed to a retentive Internal Tag's value. The next time a Domain started, or when there was a switchover, all retentive Internal Tags remained in error. Now a retentive Internal Tag only retains object's value that had been attributed to it. *This bug occurred since v1.21.96.*
- Fixed a memory leak in **E3 Server**, only when in Hot-Standby, whenever an object was attributed to a retentive Tag. This bug ended up causing an Out of Memory error after a few hours. *This bug occurred since v1.21.96.*

16.2.6 Domain Verifier

- Fixed a bug in **Elipse E3 Studio** that caused valid Links to be displayed in red if there was any Viewer (Screens, Frames, etc.) or Server (Alarms, Drivers, etc.) object in the root with the same name. *This bug occurred since v3.0.238.*

16.2.7 Drivers and I/O Server

- Re-implemented version and copyright information in IOServer.exe file. *This bug occurred since v3.1.11.*

16.2.8 E2Controls

- Fixed a GPF that occurred when E2Text's **Value** property was changed and the object had no configured default Zone. *This bug occurred since v3.0.219.*
- E2Text's Zones properties tab is now updated correctly when another object is selected. *This bug occurred since v3.0.219.*
- E2Text's properties tab now correctly updates the Tip text box when a new Zone is selected. *This bug occurred since v3.0.219.*
- Fixed Zone samples on E2Text's properties tab, which presented problems due to lack of a background update. *This bug occurred since v3.0.219.*
- E2Control's properties tab are now translated to Portuguese in **Elipse E3**'s Portuguese version. *This bug occurred since v3.0.219.*
- Fixed **Delete** button's behavior on E2Animation's Zone tabs (previously, the button did not work). *This bug occurred since v3.0.219.*
- Fixed a **Toggle**-type E2Button's bug, which kept alternating its value if the space button remained pressed. *This bug occurred since v3.0.219.*
- E2Text's **Value** property is now saved alongside the object's configuration; property type has been changed from **Variant** to **Double**. *This bug occurred since v3.0.219.*
- Fixed behavior of **Elipse E3 Studio**'s properties list, which did not open a window for file selection when E2Bitmap's **Filename** property's ⋯ button was clicked. *This bug occurred since v3.0.219.*
- Fixed several bugs on E2Text's **Zones** tabs.
- Fixed E2Animation's **Border** property behavior, which did not draw the border when set to True. *This bug occurred since v3.0.219.*
- **Elipse E3 Studio**'s properties list now allows to configure E2Button's **Bitmap0** and **Bitmap1** properties when clicking the ⋯ button. *This bug occurred since v3.0.219.*
- Fixed an incompatibility of E2Animation's and E2Button's redraw, which shrunk or stretched the image, unlike **Elipse SCADA**, which always kept the image's original size by cutting it or filling it with the background color. *This bug occurred since v3.0.219.*
- Changed the name of E2Animation's Zone edition tab from **E2Animation** to **Zones**. *This bug occurred since v3.0.219.*

- Fixed E2Text's and E2Animation's drawing, which did not fill the object's background when there was no active Zone in the current value. *This bug occurred since v3.0.219.*
- Reviewed E2Controls' properties descriptions, which were incomplete in AppBrowser. *This bug occurred since v3.0.219.*
- Fixed the behavior of E2Setpoint's and E2Display's **Multiline** property, which now can only be turned on when the object is set as **String** or **Date** types. *This bug occurred since v3.0.119.*
- Fixed E2Setpoint's line break when **Multiline** is enabled, which did not break any words larger than the control's length. *This bug occurred since v3.0.119.*
- When a value of a type other then the one set in E2Setpoint is attributed via scripts, E2Setpoint now accepts a value from the original type, but displays the formatted value according to Setpoint type. If conversion fails, the Setpoint is left empty. *This bug occurred since v3.0.119.*
- Fixed E2Setpoint's behavior of showing the keyboard's cursor at an incorrect place when **Multiline** property is enabled, and had more than one line of text. *This bug occurred since v3.0.119.*
- E2Bitmap now correctly displays an "X" when an image path is invalid or empty. *This bug occurred since v3.0.219.*
- Fixed redraw bugs in buttons for choosing colors on E2Text's **Zones** tab. *This bug occurred since v3.0.219.*
- Added a new button to select an image file on E2Animation's **Zones** tab.
- E2Text's and E2Animation's **BlinkTime** property can now be changed at run time. *This bug occurred since v3.0.119.*
- Fixed behavior of E2Text's and E2Animation's **Zones** tab. Now **Min**, **Max**, and **Blink** options are disabled when Zone is the default one. *This bug occurred since v3.0.119.*
- Improved image opening time in E2Controls, especially images with no transparency. *This bug occurred since v3.0.119.*
- Changed enumeration names on E2Button's **Type** property to English. *This bug occurred since v3.0.119.*
- Fixed E2Gauge drawing; ticks' texts are now centered according to them. *This bug occurred since v3.0.119.*
- E2Controls now have two different versions, English and Portuguese (other versions use the English version). *This bug occurred since v3.0.219.*

16.2.9 E3Alarm
- Fixed a problem that caused the text to be cropped when not using a True Type font, with size 12 or smaller.

16.2.10 E3Chart
- Fixed a bug in E3Chart's legend, which displayed the message ":256" on Pen's status, even when it is properly connected. *This bug occurred since v1.20.385.*
- Fixed a bug in E3Chart Pens' draw style: when not solid (for example, dotted), and sized 1 (one) or higher, it used to display a continuous drawing.
- Fixed E3Chart's **Dot Search** mode, which did not work if data on X axis was not sorted out in ascending order.
- Fixed E3Chart's Pens and Axes collections' behavior, which allowed the creation of objects with the same name. *This bug occurred since v1.21.96.*
- When using a real time scale, now there is a 2-pixel margin on E3Chart that keeps Pen's current data from hiding behind the Axis line. *This bug occurred since v1.21.96.*

16.2.11 E3 Tweak
- **E3 Tweak** now allows to individually configure log sessions **Full.E3Admin** and **Full.ServerControlMonitor**. *This bug occurred since v3.1.32.*

16.2.12 ElipseX Libraries
- Fixed a bug that caused an ActiveX created in **Elipse E3 Viewer** at run time with the **AddObject** method to disable its user interface. *This bug occurred since v1.21.96.*

16.2.13 Find and Replace
- Fixed **Elipse E3 Studio**'s **Find and Replace** tool, which did not find values in fields of Table Link rows. *This bug occurred since v3.0.88.*

16.2.14 Frames
- Fixed a bug which caused modal screens (**DoModal**) inheriting settings of a resizable **Elipse E3 Viewer** not to be resizable themselves.

16.2.15 Historic

- Fixed the text alignment on Historic's property window (**Historic** tab) and Storage's property window (**Storage** tab). *This bug occurred since v3.1.188.*

16.2.16 Installation

- Removed Service Pack verification for **Windows Vista**. *This bug occurred since v3.1.115.*

16.2.17 Interface

- Fixed input of property's limit values on the Links edition window for Analog Links, which did not allow typing negative or fraction values.
- Fixed a bug that prevented **E3 Server** from recording events on Windows' events log. *This bug occurred since v3.1.1.*
- Changed behavior of PLUS SIGN (+), MINUS SIGN (-), and ASTERISK (*) keys to open cell edition, even on the first column, for **Elipse E3 Studio**'s flat (non-hierarchical) spreadsheets. *This bug occurred since v1.21.96.*
- Removed the 🕐 button from the lower left corner of **Elipse E3 Studio**'s Personalize window. *This bug occurred since v2.0.10.*

16.2.18 Links

- Fixed a bug that caused some Links from a Remote Domain to be stalled after Domain disconnection, instead of assuming a Null value and a bad quality.
- Fixed the behavior of XControls in **Elipse E3 Studio** when these ones are linked to complex or constant expressions, as well as Links only among XControl's internal objects (Links were not activated). It is now possible to view the XControl's proper behavior in **Elipse E3 Studio**. *This bug occurred since v1.21.96.*
- Fixed a bug when updating Links with expressions referring to multiple Tags. *This bug occurred since v3.0.449.*
- Fixed **Elipse E3**'s behavior for object or property names containing a single letter, except for ASCII characters, where brackets may not be added when needed.
- Fixed a bug when handling Link events, when an event opening a window could not be handled completely until there was another variation in a property referred by a Link. *This bug occurred since v3.0.213.*

16.2.19 Other Corrections

- Removed a dependency to lprop.dll, which does not exist in **Windows Vista** x64, and which was preventing **Elipse E3** x64 programs from executing on that platform.
- Fixed !register.bat file to record E3Playback's OCX as well. *This bug occurred since v3.1.97.*

16.2.20 Playback

- Fixed a bug that caused E3Playback queries to fail if the Alarms table was using **EventTimeDbl** field, and if the database was an Oracle server. *This bug occurred since v3.1.115.*
- Fixed a bug in playback data loading, which failed with an 80020005 error in case any field definition table had a NULL value, which usually occurred only if users updated tables manually.
- E3Playback's events list now supports double-click on an event to move the playback's clock to the time of the event. This behavior also works on **Play** mode, or if the event had already been selected on the list. *This bug occurred since v3.1.189.*

16.2.21 Remote Domains

- Fixed a delay in the initial attempt to connect to a client Remote Domain. Improved failure or success detection time for a **ping** command at disconnection or reconnection.

16.2.22 Screen Objects

- Changed **Boolean** values formatting behavior to follow user's language, similar to script's behavior.
- Fixed a bug in **Elipse E3 Studio** when pasting non-western characters, such as Cyrillic.
- Fixed a bug in **Elipse E3 Studio**'s screen editor that caused excessive CPU consumption, which could hang a process, when users selected the DynamicMove or DynamicRotate objects applied to drawings with many details. *This bug occurred since v1.21.96.*

- Fixed a bug on keyboard browsing, where the Label (MSForms) object was capturing the TAB key when **TabStop** property was set to True, thus preventing the focus to move to other objects. *This bug occurred since v1.21.96.*
- Fixed a bug in SetPoint's or Display's word processing in **Elipse E3 Studio**, which incorrectly doubled their sizes every time they were edited if the text was empty. *This bug occurred since v1.19.87 (approximately).*

16.2.23 Scripts Editor

- Fixed behavior of **Elipse E3**'s Scripts Editor, which used to move the cursor to the beginning of the script again when gaining focus, which made the edition of large scripts more difficult. *This bug occurred since v3.1.232.*
- Fixed behavior of objects and events selection lists on Scripts Editor toolbar, which was left blank if the selected object in another script view was not erased. *This bug occurred since v2.0.69.*

16.2.24 Storage

- Storage's cache is now emptied every 1 (one) second, thus keeping data from holding for much longer for cache filling up. *This bug occurred since v1.21.96.*
- Fixed a value validation in Storage fields' **Type** property, which now does not accept invalid values passed via scripts.

16.2.25 Studio

- Fixed minor translation and typing errors in different places in **Elipse E3 Studio**. On **Toolbar** and **Options** tabs of **View - Personalize** menu, and in the Domain Wizard.
- Fixed some graphical interface elements in **Elipse E3 Studio** that used a different font (Segoe UI) from the rest of the software (Tahoma). *This bug occurred since v3.1.1.*
- **Elipse E3 Studio** resumed recording the current user's preferences in Windows Registry. This includes default configuration for new objects (foreground and background colors, font, alignment, etc.), screen editor's configuration, among others. *This bug occurred since v2.0.52.*
- Fixed **Paste** command's behavior in the object's contextual menu in edition views.
- Fixed Storage configuration's Drag and Drop behavior, which used to display a plus sign when dragging a field (indicating a copy). The plus sign has now been removed, since copy operation is not supported.

16.2.26 Translation

- English: the term "Packages" is now translated as "Packets".
- Spanish: the position of the word "contraseña" was corrected on DBServer's **Settings** tab in **Elipse E3 Studio**.
- English and Spanish: replaced the term "Associações" on **E3 Admin**'s Domain settings window with the term "Links".
- English: fixed translation bugs on the column's properties window in the Legend, as well as on E3Chart's **Legend** tab.
- English: fixed some minor translation and alignment bugs throughout **Elipse E3**.

16.2.27 Viewer

- Shortcut keys now work on modal screens opened with another shortcut key.
- Fixed a GPF occurring in **Elipse E3 Viewer** under some conditions after closing a modal screen containing an E3Browser. *This bug occurred since v1.21.96.*
- Fixed Viewer's and Application's **GetFrame** method to force a script error when it fails. *This bug occurred since v1.21.96.*

16.2.28 WebViewer

- The file rmchart.dll is now installed on **System32** folder.
- Fixed a bug that resulted in a blank screen when using **WebViewer** with Internet Explorer 8. *This bug occurred since v3.0.288.*
- Fixed **WebViewer**'s scroll bar behavior, which was being displayed even when it was not needed.

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