

# KRYON™

BE YOUR FUTURE

## Release Notes

Kryon RPA Platform v19.4

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Document revision: 18-Sep-2019

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# Kryon 19.4

**Release Date:** September 22, 2019

## We've supercharged our robots with even greater intelligence!

**Kryon AI Booster** introduces a whole new collection of Advanced Commands to RPA version 19.4. Powered by Microsoft Azure Cognitive Services and seamlessly integrated into your workflows, these commands give Kryon robots exciting abilities to work with structured and unstructured data like never before. From recognizing sentiment to understanding handwritten text, now's the time to discover all the new things they can do.



We've also upgraded security for these smartened-up robots, with more flexible options and tighter control for the Credentials Vault. And, of course, that's not all! Read on...

## Kryon Studio

Our toolbox of Advanced Commands gets even more robust with the addition of **AI Booster**, powered by Microsoft Azure Cognitive Services. Simply by adding one or more of these Advanced Commands to your workflows, your robots can now recognize handwritten text; analyze text for language, sentiment, and key phrases; and extract key data from forms. The commands may be powered by artificial intelligence, but the results are anything but artificial!



### TIP

**Obtain a license directly from Microsoft to get started with these commands today!**

Using our new Microsoft Azure commands requires a license directly from Microsoft. Check out the [Azure Cognitive Services website](#) for more details. Microsoft offers a free trial as well as a free-tier license in order to help you get started.

## 1. Advanced Commands: *AI-Powered Document and Text Analysis* – NEW!

- *OCR: Printed and Handwritten Text (MS Azure)*

Analyze the printed and handwritten text of a scanned file and repeat a sequence of commands for each page

- *Get text (MS Azure)*

Used in conjunction with the *OCR: Printed and Handwritten Text* command to save scanned document text into a variable

- *Does word exist (MS Azure)*

Used in conjunction with the *OCR: Printed and Handwritten Text* command to check if a document contains specified words

- *Form Recognizer (MS Azure)*

Analyze the contents of a scanned file to extract key pieces of structured data for each recognized form

- *Get receipt data (MS Azure)*

Used in conjunction with the *Form Recognizer* command to extract relevant data from scanned sales receipts (such as transaction time/date, merchant data, taxes/totals, etc.)

- *Text Analytics: Analyze sentiment (MS Azure)*

Analyze the sentiment of a given text and return the result as a score from 0% to 100% (negative to positive)

- *Text Analytics: Detect language (MS Azure)*

Analyze a text and detect its language from a wide variety of world languages and dialects; provide the accuracy level of the result

- *Text Analytics: Identify key phrases (MS Azure)*

Analyze a given text and return a list of detected key phrases

## 2. Advanced Commands: *Email: Save message* – NEW!

- Used in conjunction with the *Get email messages* command to save an email message to a specified location
  - Supports a wide variety of email file formats: EML, HTML, MHT, Outlook message format, Outlook message format - Unicode

### 3. Advanced Commands: Enhanced & Expanded

- *Find*
  - Significantly enhanced the options for finding text matching a regular expression:
    - Added ability to include line breaks and variables in the regex pattern
    - Added ability to capture groups of relevant data within the result, then further parse those groups into individual elements
- *Get email messages*
  - Added support for POP3 email servers
- *Run script (Python)*
  - Added the ability to select which version of Python to use when running a Python-based script (either the Kryon installed version or a customer-installed version on the client machine)

### 4. Tesseract OCR engine upgrade

- Kryon RPA now includes the most recent Tesseract OCR engine (version 4.1), which added an LSTM-based OCR engine for advanced processing and accuracy
  - Both the *Read from Screen* core action and the *Convert to text (Tesseract)* Advanced Command benefit from this upgrade

### 5. Report Generator: improved reporting

- Report data for deleted users now appears with relevant usernames

## Security

### Maximize security with Credentials Vault permissions

Now when creating a credential in the Credentials Vault, you can designate who is authorized to use it: a single user, a list of specific users, a predefined group, or everyone.

## Licensing

### Improved license management for inactive users

To allow maximum flexibility when managing your Kryon licenses, designating a user as **Inactive** now releases his or her license seat, enabling easy assignment to a different user.

Miscellaneous bug fixes, additional performance improvements, and security upgrades

# Kryon 19.3.1

**Release Date:** August 11, 2019

Kryon RPA version 19.3.1. incorporates improvements that make installation of Kryon server and clients quicker and more efficient than ever before!

## RPA Server Installation

- Automatic installation of software prerequisites (when required)
- Optional automatic local installation of Microsoft SQL Server 2017 Express Edition (for test environments)
- Optional automatic installation of Seq (centralized logging package)
- **Kerberos** Optional automation generation of KEYTAB file
- **TLS/SSL** Optional automatic parsing/preparation of customer-provided TLS/SSL certificates

## Kryon Studio & Robot Installation

- Automatic installation of software prerequisites (when required)

Miscellaneous bug fixes, additional performance improvements, and security upgrades

# Kryon 19.3

**Release Date:** July 14, 2019

Kryon RPA version 19.3 makes major advances in authentication and security, with the introduction of a brand-new authentication framework, powered by Aerobase. We've also added centralized logging capabilities, meaningful upgrades to HTML compatibility and functionality, a new role for Console users, and more. Beyond all that, we've done some serious bug-squashing in this release, so you'll notice significant improvements in stability, reliability, security, and runtime performance.

## Platform Infrastructure

**Introducing our new authentication framework, powered by Aerobase.** All Kryon components are now supported by our new authentication infrastructure, allowing for more flexible and secure user management, including:

- Improved integration with Microsoft Active Directory, utilizing the industry-standard Kerberos protocol
- Integration with numerous identity providers/access management platforms – initially, Okta and Google
- Availability of two-factor authentication; *and*
- Continued support for username & password authentication (of course!)

**Centralized logging capabilities via Seq integration.** Seq replaces SmartInspect as Kryon's standard logging software, introducing numerous advantages:

- Single, server-side installation (without the need to install software on client machines)
- Ability to view server and client event logs from a single location
- Browser-based application with advanced search and filtering capabilities
- Ability to easily export all relevant data to a CSV or JSON file, which can be sent for further investigation and support

## Kryon Robots & Kryon Studio

The new **Kryon Connector** Firefox extension enables a host of Kryon features not previously available for Firefox:

- **Window detection using HTML objects**
- **Advanced Commands:**
  - *Get web page HTML*
  - *Run JavaScript on page*
  - All HTML commands (*Get HTML table, Get HTML object text, Get HTML object value, Get HTML object, Set HTML object value, Does HTML object exist, Click on HTML object, Scroll to HTML object, Extract from HTML table/list*)

Install this extension on all Kryon Robot and Studio machines to develop and execute workflows that run seamlessly in Firefox.



### TIP

The **Kryon Connector** Firefox extension is distributed as part of the Kryon RPA installation package. For quick and easy installation instructions, see the ***Kryon RPA Platform Installation & Upgrade Guide – Installing Clients***.

## Kryon Studio

### 1. Cross-domain iframe support

All HTML Advanced Commands now support recognition of iframe objects hosted on outside domains. These objects are now:

- selectable in KryonStudio during wizard development
- detectable by Kryon Robots at runtime

Be sure to keep the internet browsers on your client machines up to date to ensure cross-domain iframe support! This functionality is currently supported for Internet Explorer 11, Chrome 75 +, and Firefox 67 +.

## 2. ABBYY FineReader engine upgrade SmartScan Feature

- Our **SmartScan** Advanced Commands now support ABBYY FineReader's most current OCR engine (version 12). This engine has shown significant improvements in recognition accuracy, and was designed specifically to provide:
  - improved recognition of low-res documents
  - improved recognition of tables
  - major improvements in Asian language detection
- All **SmartScan** Advanced Commands continue to support FineReader engine version 11.

## 3. Konnichiwa! We're pleased to introduce the first localized version of Kryon Studio... Japanese. Keep your eyes open for more languages to come!



### TIP

For instructions on changing the Kryon Studio interface language, see the *Kryon RPA Platform Installation & Upgrade Guide – Installing Clients*.

## Kryon Console

### New CONSOLE VIEW ONLY user role

Now you can specify that a user should have read-only access to Kryon Console. This allows the user to view all of Console's settings, data, reports, and dashboards; but disables the user's access to **Add/Update/Delete** actions. Of course, access to Console's full functionality is still available, now through the role entitled **CONSOLE MANAGER**.

Miscellaneous bug fixes, additional performance improvements, and security upgrades

# Kryon 19.1.3

**Release Date:** April 8, 2019

Miscellaneous bug fixes, additional performance improvements, and security upgrades



## **Third-party components**

[Download](#) a detailed list of third-party components included in this release.

# Kryon 19.1.1

Release Date: February 17, 2019

## Kryon Studio

### 1. Advanced Commands: Enhanced & Expanded

- *Execute SQL query*
  - Added error handling capabilities when using **predefined queries**, making it easier to identify and troubleshoot issues



#### CAUTION

**Upgrading from an earlier version? Check/revise wizards that use custom queries**

In conjunction with the expanded error handling capabilities of the **Execute SQL query** command, error handling for the **custom queries** option has also been revised:

In prior versions, custom query errors were reported in the command's result variable. Starting with v19.1.1, an **error variable** must be defined in the command's settings for proper error handling to occur.

Miscellaneous bug fixes, additional performance improvements, and security upgrades



#### Third-party components

[Download](#) a detailed list of third-party components included in this release.

# Kryon 19.1

**Release Date:** January 31, 2019

## Kryon Studio

Our newly designed **HTML OBJECT SELECTOR** makes using **HTML Commands** a snap. It's now easier than ever to select HTML objects right from your web browser, and you'll have more power to customize the system-generated selectors. Also be sure to check out our brand new HTML command: **EXTRACT FROM HTML TABLE/LIST**.

Some of our most frequently-used **Excel Commands** have also received an upgrade (and new names!) to make them easier to work with and even more powerful.

### 1. Advanced Commands: New

- *Extract from HTML table/list*
  - Extract all or selected data from a web-based table or list with step-by-step instructions and just a few clicks
- *Copy from Excel*
  - Replaces and enhances the *Get Excel range values* command
  - Incorporates an **Excel selector** for easy in-workbook selections
- *Paste to Excel*
  - Replaces and enhances the *Set Excel range values* command
  - Incorporates an **Excel selector** for easy in-workbook selections
- *Delete from Excel*
  - Replaces the need to set empty cells (previously found in the *Set Excel range values* command)
  - Incorporates an **Excel selector** for easy in-workbook selections
- *Log an action*
  - Replaces and enhances the *Report user action* command
  - Allows for definition and logging of any robot action (whether attended or unattended)
  - Attended robot actions can be retrieved through **Studio's Report Generator**; unattended robot actions are logged and reported in **Kryon Console**

### 2. Advanced Commands: Enhanced & Expanded

- *HTML Commands*
  - Redesigned user interface, incorporating a point-and-click **HTML Object Selector** and powerful selector-editing capabilities

## Kryon Console

1. **Run History** enhanced for tasks and triggers
  - Columns added to report data as configured in the new **LOG AN ACTION** advanced command
2. **Triggered task execution**
  - Added option to easily re-run a failed triggered task
  - Added option for user to specify whether task duplication should be permitted for time-based triggers
3. **Scheduled task execution**
  - Changed default option to prevent skipping a scheduled task when the robot it's assigned to is busy at start time
4. **Notifications** enhanced for tasks and triggers
  - Added ability to specify more than one email address for task-based notifications

## Kryon Robots

We're pleased to announce that **Kryon Attended Robot** is now... **Kryon Assistant**. Though you'll still see **Kryon Assistant** referred to generally as an attended robot, we're sure that its new proper name better expresses its mission in life: to be always on call to help whenever and wherever needed!

The robots are also enjoying some significant performance improvements:

- **Attended wizard/sensor runtime performance**
  - Improved execution time when launching a wizard from a URL
  - Enhanced script cache functionality
- **Long wizard/loop runtime performance**
  - Improved execution time for long wizards
  - Improved functionality and execution time for embedded wizards

## Kryon Server

The **Kryon Server** installation package can now automatically install and configure **Kryon Console**, making initial installations and upgrades quicker and easier.

Miscellaneous bug fixes, additional performance improvements, and security upgrades



## Third-party components

[Download](#) a detailed list of third-party components included in this release.

# Kryon 5.25.1

**Release Date:** October 10, 2018

## Kryon Studio

Our new **CALL REST API METHOD** Advanced Command allows for seamless and even more efficient interaction between Kryon robots and your other applications and systems. We've also expanded the functionality and flexibility of our **TABLE LOOKUP** and **CALL WEB SERVICE** commands – making information retrieval easier and more flexible.

### 1. Advanced Commands: New

- *Call REST API method*

Allows wizards to directly interact with internal and external REST APIs

### 2. Advanced Commands: Enhanced & Expanded

- *Table lookup*
  - Added the option to retrieve either a **single value** or **all values** matching the specified lookup criteria
- *Call web service*
  - Added support for calling web services that utilize WSDL specifications (Web Services Description Language)

### 3. Workflow view enhancements

- The new **VISUAL PREVIEW** window allows you see a screenshot of any recorded step simply by clicking on it in the flow
- You can now export the full **WORKFLOW VIEW** map of your wizard to PDF with just a single click

Miscellaneous bug fixes, performance improvements, and security upgrades



### Third-party components

[Download](#) a detailed list of third-party components included in this release.

# Kryon 5.25

**Release Date:** August 2, 2018

## Kryon Studio

Be sure to take a look at our new and enhanced Advanced Commands that make working with tables more efficient than ever. We've also expanded the functionality and flexibility of our **FORMAT DATE** and **CALL WEB SERVICE** commands so that it's easier to retrieve the data you need in exactly the format you need it.

### 1. Advanced Commands: New

- *Table lookup*

Search for a value in a table (the "lookup value") and retrieve a corresponding value of your choice:

- The location of the lookup value (identified by its row and column number)
- All the values in the lookup value's row
- All the values in the lookup value's column
- A value from a specific column in the lookup value's row
- A value from a specific row in the lookup value's column

- *Loop table*

Perform a specified action or series of actions for each row in a table

### 2. Advanced Commands: Enhanced & Expanded

- *Get table data*

- Added the ability to retrieve all the values in a specific row or column of a table

- *Format date*

- Added the option to select a regional format for the output date

- *Call web service*

- Added support for logging into a web service using credentials from the Kryon Credentials Vault

Miscellaneous bug fixes, performance improvements, and security upgrades

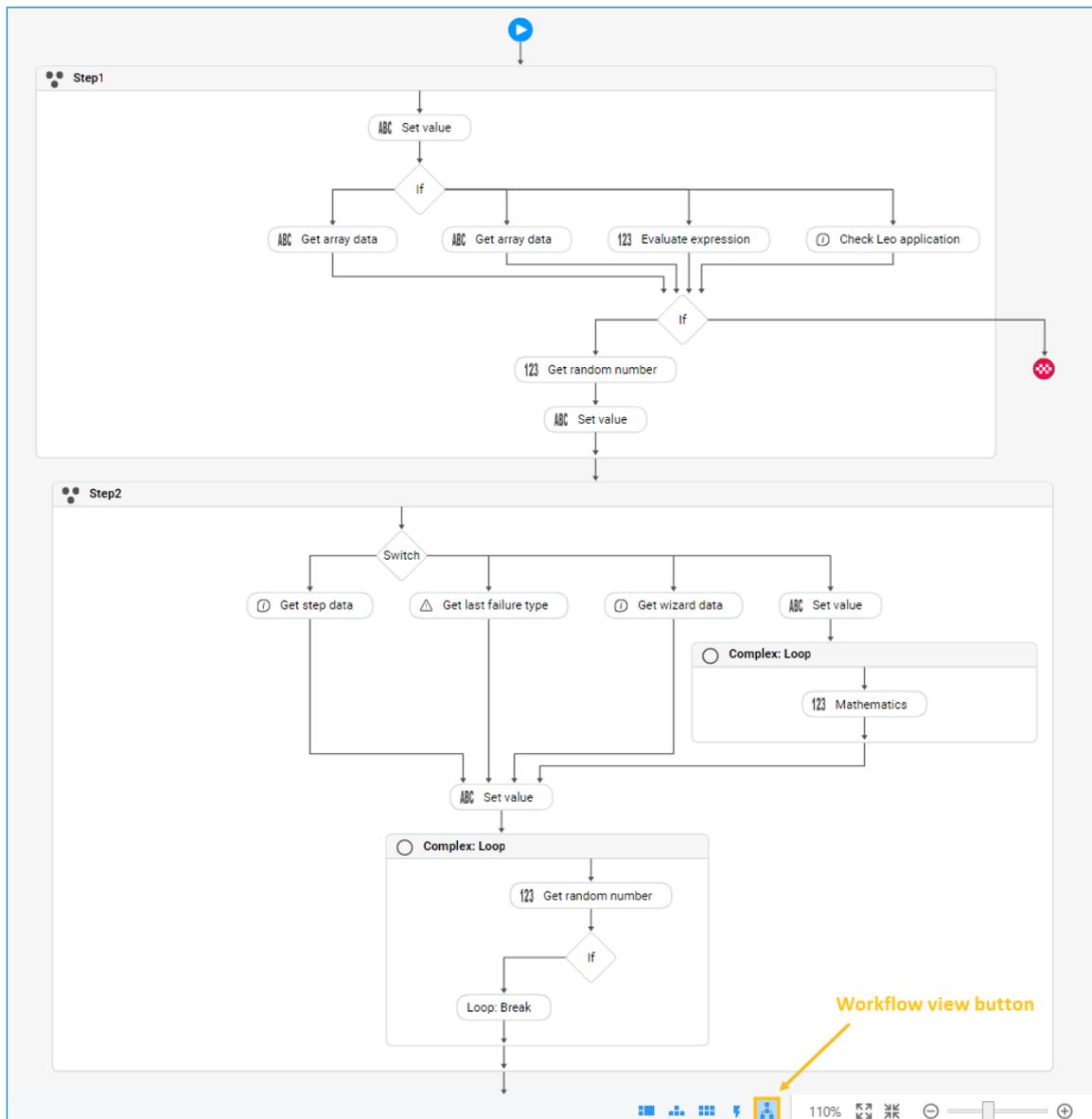
# Kryon 5.23

Release Date: July 5, 2018

## Kryon Studio

Our new **Workflow view** gives you the big picture.

Just click the **Workflow view** button to see the overall flow of your wizard along with all the details – including the actions taken in each step, logical operations (such as **Loop** and **If/Else**), **Fallbacks**, and more.



Miscellaneous bug fixes, performance improvements, and security upgrades

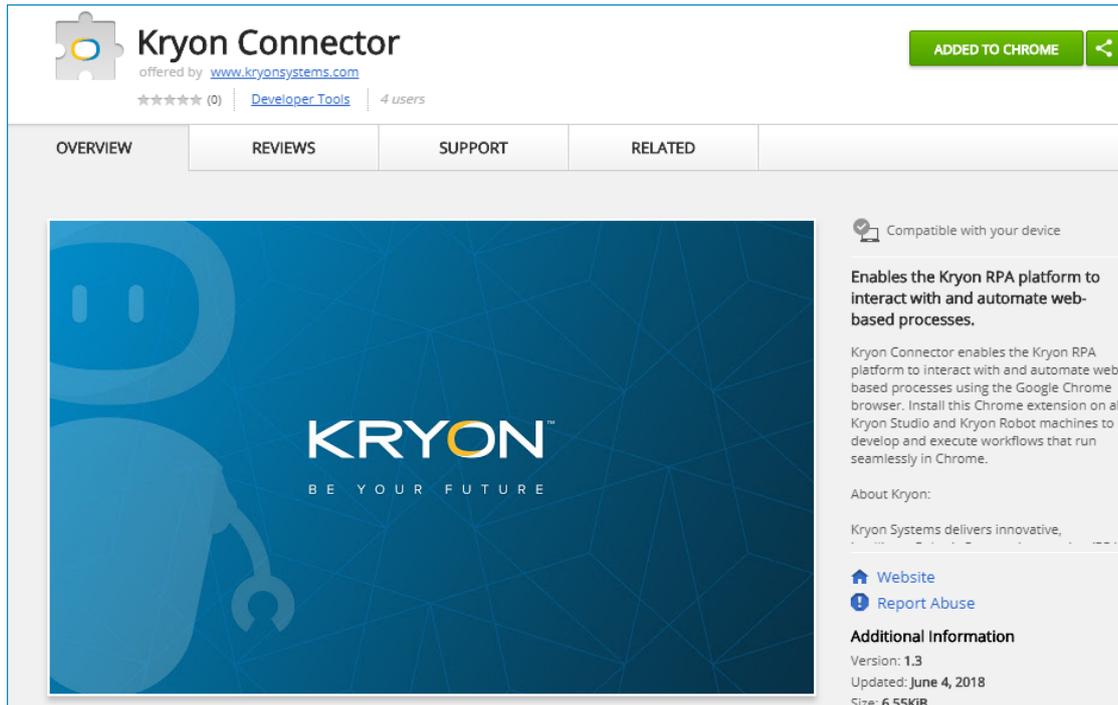
# Kryon 5.21

Release Date: June 7, 2018

## Kryon Robots & Kryon Studio

### Introducing Kryon Connector...

**Kryon Robots and Studio can now speak to Chrome!**



With the new **Kryon Connector** Chrome extension, a host of Kryon features previously available only in Internet Explorer are now also available in Chrome:

- **Window detection using HTML objects**
- **Advanced Commands:**
  - *Get web page HTML (formerly Get IE page HTML)*
  - *Run JavaScript on page*
  - *All HTML commands (Get HTML table, Get HTML object text, Get HTML object value, Get HTML object, Set HTML object value, Does HTML object exist, Click on HTML object, Scroll to HTML object)*

Install this Chrome extension on all Kryon Robot and Studio machines to develop and execute workflows that run seamlessly in Chrome.



**TIP**

The Kryon Connector extension will be automatically installed when you install or upgrade your Kryon Robot and Studio clients to version 5.21 or later. Be sure to enable it when prompted in Chrome:

"Kryon Connector" added

Another program on your computer added an extension that may change the way Chrome works.

It can:

- Read and change all your data on the websites you visit
- Communicate with cooperating native applications

Enable extension

Remove from Chrome

Kryon Connector is also available as a free download from the [Chrome Store](#).

## Kryon Console

New **time-based triggers** allow for easier and more flexible scheduling of recurring tasks than previously available with Scheduler.

**Trigger**  
A trigger continually monitors events. Whenever a relevant event (or the timing you've specified) occurs, a new task is initiated.

---

**← Time**

Minutes   Hourly   Daily   Weekly   Monthly   Yearly   Advanced

Time zone: (UTC+02:00) Jerusalem

On the 1st Day of every 4 month(s) at 01 00 AM
   
 On the Last Monday of every 1 month(s) at 01 00 AM

Don't worry about overcrowding the queue. If a task created by this trigger is already waiting, it won't be duplicated.

**Preview of triggered tasks:** 10 >

Monday, June 25, 2018 at 1:00 am
Monday, July 30, 2018 at 1:00 am
Monday, August 27, 2018 at 1:00 am
Monday, September 24, 2018 at 1:00 am
Monday, October 29, 2018 at 1:00 am
Monday, November 26, 2018 at 1:00 am
Monday, December 31, 2018 at 1:00 am
Monday, January 28, 2019 at 1:00 am
Monday, February 25, 2019 at 1:00 am
Monday, March 25, 2019 at 2:00 am

- The new time-based trigger mechanism allows for the creation of task schedules with extreme precision and flexibility – in time frames as small as minutes or as large as years
- As with other trigger types, tasks initiated by time-based triggers:
  - can be assigned normal or high queue priority
  - can be assigned to a specific robot, to the first available robot, or to the first available robot in a specific group

## Platform Infrastructure

1. **.NET Framework 4.7.1 or higher required** – updated minimum requirements for Kryon Application Server and all Kryon clients (unattended/attended robots and Studio) to include [.NET Framework 4.7.1](#) or higher

**NOTE:** Organizations upgrading to version 5.21 (or later) should first: (1) ensure that all machines meet [Microsoft's minimum requirements](#) for .NET Framework 4.7.1 installation; and (2) [download and install](#) .NET Framework 4.7.1.

Miscellaneous bug fixes, performance improvements, and security upgrades

# Kryon 5.19

Release Date: May 14, 2018

## We're so proud of our RPA platform, we've given it our name!

The Leo RPA Platform has always been 100% Kryon, and now its name is too. None of the things you love have changed, but we've said a fond farewell to Leo... and we're pleased to introduce the **KRYON** RPA Platform (featuring Kryon Robots, Kryon Studio, Kryon Console, and more).

And this is just the first of the exciting things to look forward to in the days and weeks ahead. Stay tuned!

## Kryon Console

1. **IIS configuration changes** – modified folder mappings for Console sites and applications

**NOTE:** Organizations upgrading to version 5.19 (or later) must change their existing Console configurations in IIS. Find detailed instructions in the *Kryon RPA Platform Installation & Upgrade Guide*.

Miscellaneous bug fixes, performance improvements, and security upgrades

# Kryon 5.18

**Release Date:** April 26, 2018

## Kryon Server

1. **TLS/SSL support** – expanded support for TLS/SSL protocols
  - Organizations using Username & Password authentication are now able to secure all communications between server and clients with TLS/SSL

Miscellaneous bug fixes, performance improvements, and security upgrades

# Kryon 5.17

Release Date: April 12, 2018

## Kryon Console

1. **IIS configuration changes** – modified settings for Console sites and applications



### CAUTION

**Upgrading to v5.17? Keep Console working!**

Organizations upgrading to version 5.17 (or later) must change their existing Console configurations in IIS. Find detailed instructions in the ***Kryon RPA Platform Installation & Upgrade Guide***.

## Platform Infrastructure

1. **FIPS compliance** – all encryption methods used by the Kryon RPA Platform, both client and server-side, are now FIPS compliant.
  - When the Windows FIPS-compliance option is enabled, disable log file encryption in \*.sic files so that Kryon system log files can be written. (*System log files are those generally used for support purposes.*)



### NOTE

**What is FIPS?**

The Federal Information Processing Standard (FIPS) Publication 140-2, (FIPS PUB140-2), is a U.S. government computer security standard used to approve cryptographic modules.

Miscellaneous bug fixes and performance improvements

# Kryon 5.7.0

**Release Date:** February 15, 2018

## Kryon Studio

### 1. **Advanced Commands: New**

- *Scroll to HTML object*
  - Scroll to an object in the active **Internet Explorer** window so that it is visible within the window

## Kryon Admin

1. **Companies and Users** – added the option to add Attended Robot users by syncing with a selected Active Directory group

Miscellaneous bug fixes and performance improvements

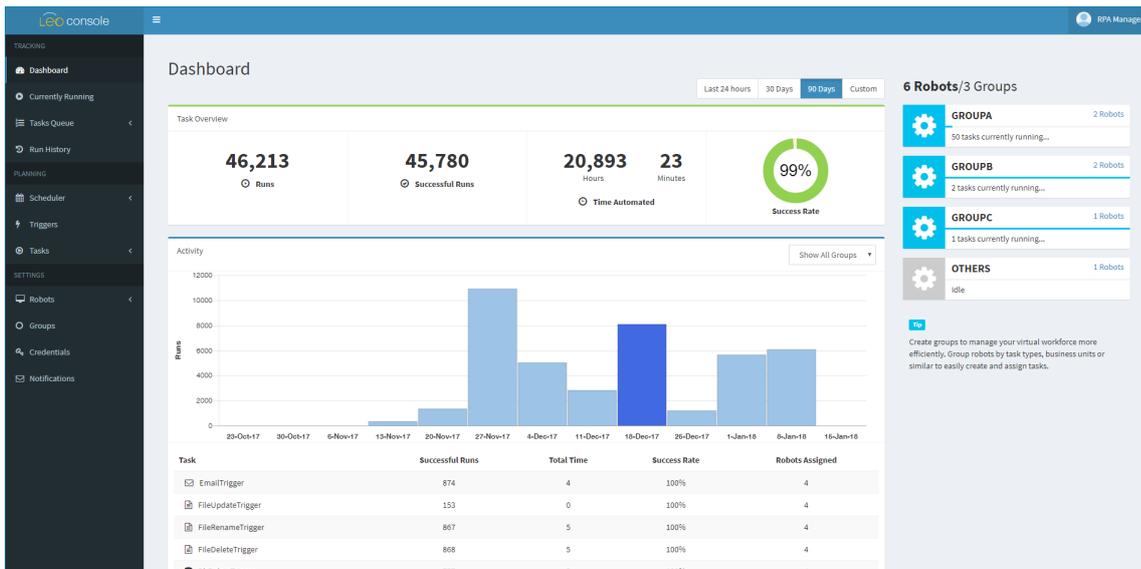
# Kryon 5.6.0

Release Date: January 18, 2018

## Kryon Console

### Introducing Analytics...

A whole new way to monitor the performance of your robot workforce



With Kryon Console's new Analytics functionality, you can monitor the efficiency of your robot workforce at a glance. Or obtain a more detailed perspective with a click.

This exciting new feature empowers you to:

- Track the overall performance of the Kryon RPA solution in your organization
- Track the overall performance of your virtual workforce (Kryon Robots)
- View the trend of wizard runs over time
- View analytical data per task and/or trigger
- Filter data by time frame or robot group

Stay tuned for enhanced functionality and additional KPIs coming soon!

## Kryon Admin

1. **Companies and Users** – added the option to enable/disable the support of API calls by Console user

- Organizations currently running API calls utilizing Console users should be sure to enable the **SUPPORTS API CALLS** option for these users in Kryon Admin

Miscellaneous bug fixes and performance improvements

# Kryon 5.5.0

Release Date: January 4, 2018

## Kryon Studio

### 1. Advanced Commands: New

- *Convert to text (SmartScan+)* **SmartScan+ Feature**
  - Convert an image or PDF file to text using the ABBYY recognition engine (OCR)
- *Convert to text (Tesseract)*
  - Convert an image or PDF file to text using the Tesseract recognition engine (OCR)

### 2. Advanced Commands: Enhanced & Expanded

- *Send email message & Get email messages*
  - Added shared mailbox support

### 3. Wizard Catalog

- Advanced find – added option to search for wizards by application

## Kryon Console

### 1. Settings

- Added support for specifying the email account from which notifications are sent
- Added ability to specify email(s) to which ABBYY Flexicapture (SmartScan+) notifications are sent (when processed documents require manual review)

**SmartScan+ Feature**

### 2. Tasks page – added ability to search for tasks by variable name and/or value

### 3. Currently Running page – enhanced to show robots with currently running tasks within the context of all robots

### 4. Email triggers – added shared mailbox support for email triggers (Exchange servers)

### 5. Security – enhanced password encryption and secure network communications

## Kryon Admin

1. **Companies and Users** – added option to select default company for new users created by Active Directory

## Kryon Server

1. **TLS and SSL support** – added option (during server installation) to secure all communications between server and clients with full support for TLS and SSL

Miscellaneous bug fixes, performance improvements, and security upgrades

# Kryon 5.4.1

**Release Date:** December 21, 2017

## Kryon Studio

### 1. Advanced Commands: New

- *Get HTML Table*
  - Retrieve the text of an HTML table, delimited by column and row

### 2. Advanced Commands: Enhanced & Expanded

- *HTML Commands*
  - Added option to utilize a field reference to improve object-detection accuracy
- *Email: Get data*
  - Added option to retrieve email attachment names
- *Email: Save attachments*
  - Added option to define filter(s) to determine which attachments to save
- *Send email message*
  - Email account password is masked

### 3. Added ABBYY FlexiCapture integration (SmartScan+)

- Kryon Robot manages processing of documents to convert unstructured scanned documents into editable files using the ABBYY FlexiCapture engine

## Kryon Admin

1. **Login policy** – added support for changing password, password policy enforcement

## Kryon Server

1. **Security improvements** – enhanced Kryon Credentials Vault security

Miscellaneous bug fixes and performance improvements

# Kryon 5.3.1

**Release Date:** December 7, 2017

## Kryon Studio

### 1. Read From Screen

- Improved support for emulator applications, allowing for recognition of skewed text caused by window resize

## Kryon Admin

### 1. Improved support for cross-domain permissions management

# Kryon 5.3.0

**Release Date:** October 10, 2017

## Kryon Studio

### 1. Advanced Commands: New

- Java Automation commands
  - *Get Java object text*
  - *Get Java object value*
  - *Get Java object location*
  - *Set Java object value*

## Kryon Admin

### 1. Support licensing by component

- Attended Robot, Unattended Robot, Console User, Studio Developer

### 2. Enhanced license generator for channel partners

- Added support for new fields based on user role definition
- Added support for license activation by domain name
- Added support for custom license end date

# Kryon 5.2.0

Release Date: September 17, 2017

## Kryon Studio

- 1. Advanced Commands: New**
  - *Create new Excel file*
  - *Document: Get checkbox state*
- 2. Advanced Commands: Enhanced & Expanded**
  - *Get from clipboard*
    - Added support for Unicode, RTF, ANSI, HTML

## Kryon Console

- 1. Enhanced Task page**
  - Added history/tracking section
- 2. Network security enhancements**

## Kryon Admin

- 1. Changed user role definitions:**
  - Attended Robot, Unattended Robot, Console User, Studio Developer
- 2. Security enhancements**
  - Added option to encrypt DB connection

# Kryon 5.1.2

Release Date: September 14, 2017

## Kryon Studio

### 1. Read From Screen

- Added support for determining if a field background color at runtime matches the recorded color

## Kryon Admin

### 1. Added option to automatically lock and "kill" applications upon user interruption to robot wizard execution

- Config keys: `LockScreenOnInterrupt`,  
`KillAllOpenProcessesOnInterrupt`

# Kryon 5.1.0

Release Date: July 26, 2017

## Kryon Studio

### 1. Advanced Commands: Enhanced & Expanded

- *Find*
  - Added support for "close match" – to allow matching of visually similar characters (relevant for text originating from a scanned document and recognized via OCR)
- *Get email messages*
  - Return NOT\_FOUND error when the specified mailbox folder does not exist on the server

### 2. Added support for additional scrollbar types in the visual algorithm

# Kryon 5.0.3

Release Date: July 23, 2017

## Kryon Studio

### 1. Advanced Commands: Enhanced & Expanded

- *Run curl command*
  - Add support for returning output into a variable
- *Document: Get value*
  - Add support for "close match" – to allow matching of visually similar characters in scanned documents
- *Get step data*
  - Add support for use of this command in an Advanced Command step

### 2. Read From Screen

- Added support for (Google) Tesseract OCR engine
  - Supported on 64-bit Windows OS only

## Kryon Server

1. **Security improvements** – Improved protection against DDoS attacks

# Kryon 5.0.2

Release Date: July 5, 2017

## Kryon Studio

### 1. Advanced Commands: Enhanced & Expanded

- *Send email message*
  - Added support for sending images in message body

# Kryon 5.0.1

Release Date: July 5, 2017

## Kryon Studio

### 1. Advanced Commands: Enhanced & Expanded

- *Get email messages*
  - Improved IMAP support
- *Run javascript on page*
  - Added option to automatically insert function call for returning a result from javascript code
- *Get Excel range values*
  - Improved runtime performance



#### CAUTION

**Upgrading from an earlier version? Check/revise wizards that use this command**

In conjunction with the performance improvements to the *Get Excel range values* command, there have been changes to the way results are returned. While prior versions disregarded empty cells, starting with v5.0.1, data is returned with blanks for empty cells within the specified range.

## Kryon Console

### 1. Session Management: New Capabilities

- Auto-unlocking of robotic sessions
- Automatic login after machine reboot

### 2. UI Enhancements

- Robots page redesigned for improved usability

### 3. Triggers

- Improved IMAP support for email triggers

### 4. Kryon API Enhancements

- Added property to the **Get task status** API function
  - Return wizard output (to be used in conjunction with the *Report wizard output* advanced command)

# Kryon 5.0.0

**Release Date:** June 18, 2017

## Introducing Hybrid Mode

Automates business processes from end-to-end by allowing end users to initiate automation tasks (proactively via a wizard or silently via a sensor) and receive task output and results

**New Advanced Command:** *Add automation task to queue*

- Use parameters read from screen/input by user
- Add end user ability to track robotic task status in personal queue
- Return output to end user when task completes
- Continue task on end user desktop if required

**Added to Kryon Robot:** Robot Task Queue

## Kryon Studio

### 1. Advanced Commands: New

- *Document: Get text*
  - Save scanned document text into variable with option to preserve document layout

### 2. Advanced Commands: Enhanced & Expanded

- *Send email message*
  - Add support for Exchange server (EWS)
  - Allow anonymous user
  - Support HTML/Rich Text
  - Support High/Low importance
  - Change **From** and **Reply To** addresses
  - Support email address and display name for each recipient
- *Analyze scanned documents in file* (renamed *Document analysis* in v.5.5.0)
  - UI improvements for enhanced usability
  - Added option: Do not separate

## Kryon Console

### 1. Session Management: New Capabilities

- Approve/deny robot registration from Console

- Integration with Credentials Vault to store robot domain credentials

# Kryon 4.5.0

Release Date: May 22, 2017

## Kryon Server

1. Added support for server redundancy (active-passive) in RPA environment

# Kryon 4.4.0

Release Date: April 26, 2017

## Kryon Studio

### 1. Advanced Commands: Enhanced & Expanded

- *View variable list*
  - New GUI with a searchable table to enable easier debugging
- *Run javascript on page*
  - Added support for using \$ sign in the JS code
  - Added support for quirks mode in Internet Explorer
- *Find*
  - Added support for finding text matching a regular expression (regex)
- *Replace*
  - Added support for replacing text matching a regular expression (regex)
- *If Else*
  - Added support for comparison using a regular expression (regex)
- *Complex If Else*
  - Added support for comparison using a regular expression (regex)
- *Loop*
  - Added support for comparison using a regular expression (regex)
  - Added support for multiple conditions
- *Get files*
  - Added support for sorting the retrieved list of files
- *Email: Get data*
  - Added support for retrieving the email key
- HTML commands
  - Added support for quirks mode in Internet Explorer
- Excel commands
  - Added support for specifying columns using characters (in addition to numbers)
  - Added support for **XLSB** files

### 2. Advanced Commands: New

- .NET automation commands (WinForms/WPF)
  - *Get .NET object text*
  - *Get .NET object value*
  - *Get .NET object location*
  - *Set .NET object value*
- Generate new password
  - Create a new password in the Kryon Credentials Vault, either for a specified application or for a general user
- Revert password
  - Overwrite the current password in the Kryon Credentials Vault with the last saved password, either for a specified application or for a general user
- 3. Visual algorithm improvements**
  - Improved identification of checkboxes, radio buttons, and arrows
  - Numerous additional improvements and bug fixes
- 4. Window detection enhancements**
  - Added ability to match the window caption using a regular expression (regex)

## Kryon Robot

1. Added support for Japanese language in GUI

## Kryon Admin

1. Added support for searching SQL queries
2. Improved performance for searching Users

## Kryon Server

1. FIPS compliance
  - Replaced encryption methods with FIPS-compliant methods

# Kryon 4.3.9

**Release Date:** February 12, 2017

## Kryon Studio

### 1. Visual algorithm improvements

- Added support for high zoom levels (in web browsers)
  - Identification of checkboxes and radio buttons
  - Auto adjustment of offset for the current zoom level

## Kryon Robot

1. Added new configuration option to prevent end user from modifying the *Launch Kryon on login* setting

# Kryon 4.3.5

**Release Date:** December 28, 2016

## Kryon Studio

### 1. Advanced Commands: New

- *Excel column actions*
  - Insert columns, delete columns, get column count

### 2. Advanced Commands: Enhanced & Expanded

- *Extract numeric values*
  - Added support for extracting numbers enclosed by quotation marks

## Kryon Console

### 1. Tasks page enhancements

- Added *Create Date* column
- Changed default task list sort order to *Create Date*

# Kryon 4.3.4

**Release Date:** December 20, 2016

## Kryon Studio

1. **Advanced Commands: New**
  - *Excel row actions*
    - Insert rows, delete rows, get row count

## Kryon Console

1. Added support for using credentials from Credentials Vault in email and database triggers