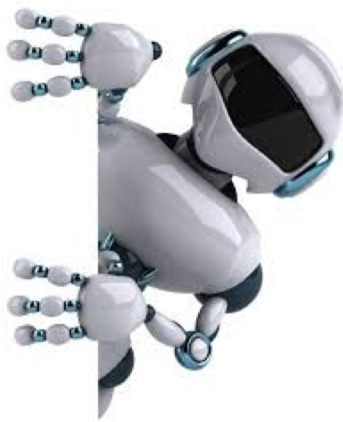


# IBM Robotic Process Automation

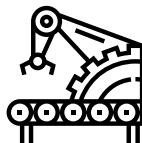
## with Automation Anywhere

24 April 2018

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Technical Sales Leader Europe  
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# Software robots are similar to physical robots

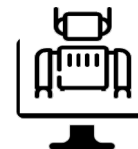


## Physical robots

Perform repetitive **physical** tasks

Example:

- Pick eight chocolates from assembly line
- Assemble a finished box of chocolates



## Software robots

Perform repetitive **software** tasks

Example:

- Log in to four different systems
- Navigate legacy screens to retrieve data
- Use data to open new account in system of record

## **ROBOTIC PROCESS AUTOMATION (RPA)**

enables companies to easily automate mundane, repetitive tasks in order to free up employees to perform higher value work

### **HOW RPA WORKS:**

**RPA 'bots' replicate the actions of humans interacting with application user interfaces**

- **No changes to existing interfaces**
- **Reduces swivel chair integration**
- **Efficiently execute high volume work**

# Key Benefits of Robotic Process Automation



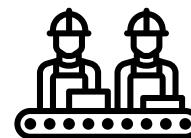
## Accelerate time to value

Create, test and deliver new automations in days or weeks



## Reduce human error

Eliminate copy/paste mistakes introduced by swivel chair integration



## Increase throughput

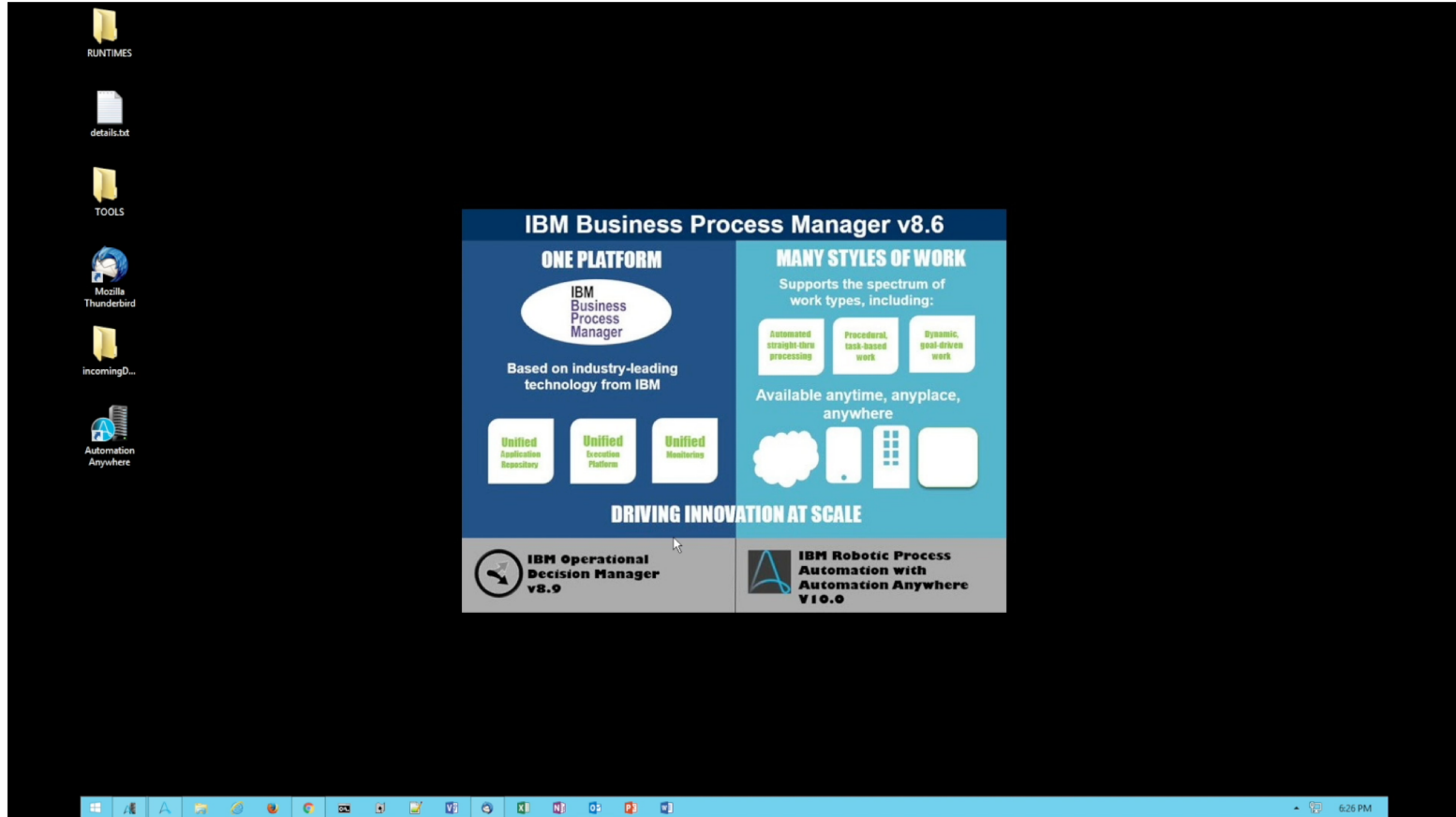
Fulfill automated tasks in seconds or minutes, round the clock



## Decrease development costs

Develop automations quickly with simple record/playback functions

# How does a Software Robot look like?



**IBM Business Process Manager v8.6**

**ONE PLATFORM**

IBM Business Process Manager

Based on industry-leading technology from IBM

Unified Application Repository   Unified Execution Platform   Unified Monitoring

**MANY STYLES OF WORK**

Supports the spectrum of work types, including:

- Automated straight thru processing
- Procedural, task-based work
- Dynamic, goal-driven work

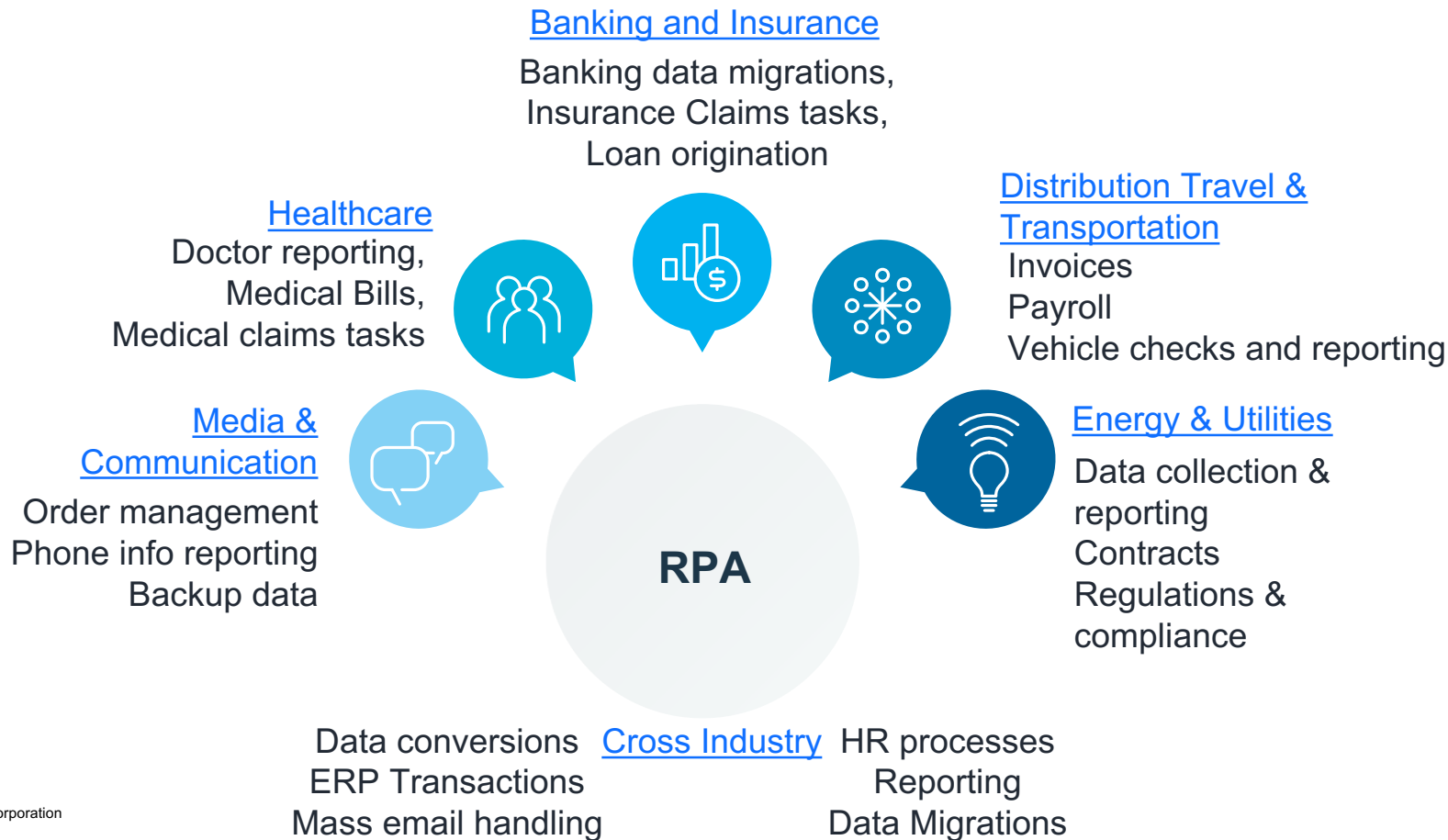
Available anytime, anyplace, anywhere

**DRIVING INNOVATION AT SCALE**

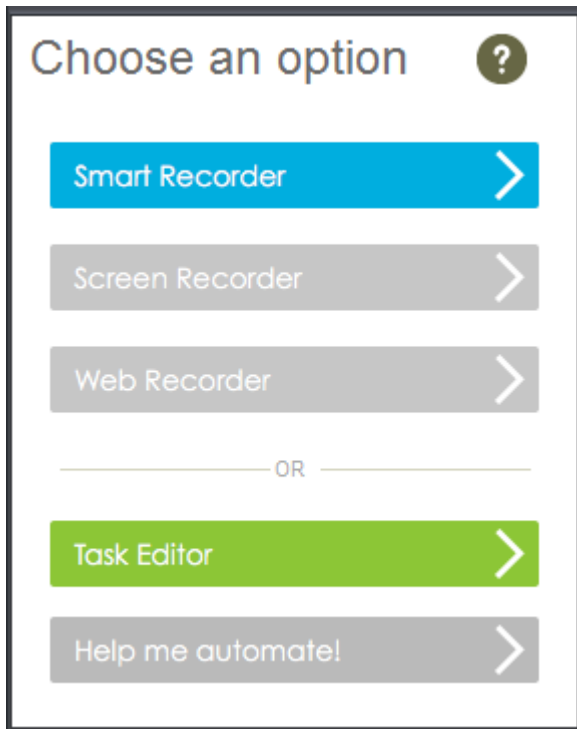
**IBM Operational Decision Manager v8.9**

**IBM Robotic Process Automation with Automation Anywhere v10.0**

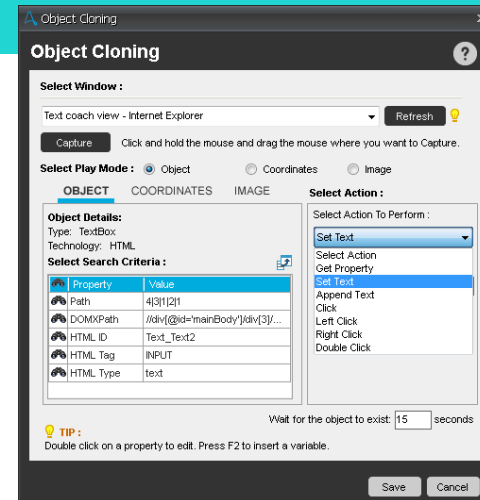
# Industry Use Cases



# Build a Bot Task in a few Minutes



Smart Recorder captures objects from various applications that use different technologies such as html, .NET, WPF, Java, Flex and Silverlight. These are saved as a set of Object Cloning commands. Can locate moved controls.



# Task Editor

The screenshot displays the Automation Anywhere Task Editor interface. The top menu bar includes File, Edit, Debug, Tools, Task, and Help. Below the menu is a toolbar with icons for New, Record, Run, and Save, along with checkboxes for 'Enable Debugging' and 'Set SnapPoint'. A search bar for help is located on the right. The left sidebar, titled 'COMMANDS', lists various automation categories like Active Directory, App Integration, Citrix Automation, Clipboard, Comment, Database, Delay, Email Automation, Error Handling, Excel, Files/Folders, FTP/SFTP, If/Else, Image Recognition, Insert Keystrokes, Insert Mouse Click, Insert Mouse Move, Insert Mouse Scroll, Internet Connection, Launch Website, Log To File, Loop, Manage Windows, Message Box, and Open. The main workspace is divided into two panes. The left pane, 'Task Actions', shows a list of actions with icons: 1. Open: "Notepad.exe" (labeled 'Desktop application command'), 2. Delay: (1000 ms) (labeled 'Runtime delay'), 3. Keystrokes: [SHIFT DOWN][SHIFT UP][SHIFT DOWN][SHIFT UP]ask[SHIFT DOWN];[SHIFT UP] in "Untitled - Notepad" (labeled 'Keystrokes'), 4. Keystrokes: [ENTER] in "Untitled - Notepad" (labeled 'Keystrokes'), 5. Keystrokes: [ENTER] in "Untitled - Notepad" (labeled 'Keystrokes'), 6. Keystrokes: [SHIFT DOWN]d[SHIFT UP]emonstrates[SHIFT DOWN];[SHIFT UP] [ENTER] in "Untitled - Notepad" (labeled 'Keystrokes'), 7. Keystrokes: [TAB] in "Untitled - Notepad" (labeled 'Keystrokes'), 8. Keystrokes: [SHIFT DOWN]f[SHIFT UP]iles/folders commands[ENTER] in "Untitled - Notepad" (labeled 'Keystrokes'), 9. Keystrokes: [TAB] in "Untitled - Notepad" (labeled 'Keystrokes'), 10. Keystrokes: [SHIFT DOWN][SHIFT UP]oop and conditional commands.[ENTER] in "Untitled - Notepad" (labeled 'Keystrokes'), 11. Keystrokes: [TAB] in "Untitled - Notepad" (labeled 'Keystrokes'), 12. Keystrokes: [SHIFT DOWN]a[SHIFT UP]vanced capabilities to create filenames based on current (labeled 'Keystrokes'), 13. Keystrokes: [ENTER] in "Untitled - Notepad" (labeled 'Keystrokes'), 14. Keystrokes: [SHIFT DOWN]a[SHIFT UP]s the task runs the actions as listed in this notepad file fo (labeled 'Keystrokes'), 15. Keystrokes: [ENTER] in "Untitled - Notepad" (labeled 'Keystrokes'), 16. If Folder Exists ("C:\Automation-Anywhere-Temporary-Folder") Then (labeled 'If Folder Exists'), 17. Comment: Before we start the task, we will delete the folder if it already exists (labeled 'Comment'), 18. Delete Folder "C:\Automation-Anywhere-Temporary-Folder" (labeled 'Delete Folder'), 19. End If (labeled 'End If'), 20. Create Folder "C:\Automation-Anywhere-Temporary-Folder" (labeled 'Create Folder'), 21. Keystrokes: 1. [SHIFT DOWN][SHIFT UP]older [SHIFT DOWN]c[SHIFT UP]reated[SHIFT DOWN]; (labeled 'Keystrokes'), 22. Keystrokes: [SHIFT DOWN]9[SHIFT UP][SHIFT DOWN]u[SHIFT UP]sed '[SHIFT DOWN][SHIFT UP] (labeled 'Keystrokes'), 23. Keystrokes: [ENTER] in "Untitled - Notepad" (labeled 'Keystrokes'), 24. Delay: (1000 ms) (labeled 'Delay'). The right pane, 'ERROR VIEW', shows a tree structure for 'Local Variables' with 'my-list-variable' (Type: List, Option: Value, Value: my-value-1, my-value-2) and 'Prompt-Assignment' (Type: Value, Option: Value, Value: Test-Value). Below this is a 'VARIABLE MANAGER' section with buttons for Copy, Copy All, Paste, Add, Edit, and Delete, and a link to 'Show System Variables'. Red arrows point from labels to specific UI elements: 'Debugger' points to the top menu bar; 'Help' points to the top right corner; 'Screen Capture View' points to the toolbar; 'Command Palette' points to the left sidebar; 'Desktop application command' points to the first task action; 'Runtime delay' points to the second task action; 'Keystrokes' points to the third task action; 'If Folder Exists' points to the 16th task action; 'Comment' points to the 17th task action; 'Delete Folder' points to the 18th task action; 'End If' points to the 19th task action; 'Create Folder' points to the 20th task action; 'Keystrokes' points to the 21st task action; 'Keystrokes' points to the 22nd task action; 'Delay' points to the 24th task action; 'Local Variable' points to the 'Local Variables' section; 'Error Handlers' points to the 'ERROR VIEW' section.

Automation Anywhere Enterprise Client - Task Editor [My Tasks\Sample Tasks\Files-Folders.atmx]

File Edit Debug Tools Task Help

New Record Run Save Enable Debugging Set SnapPoint

Search Help ...

COMMANDS

CATEGORY VIEW

- Active Directory
- App Integration
- Citrix Automation
- Clipboard
- Comment
- Database
- Delay
- Email Automation
- Error Handling
- Excel
- Files/Folders
- FTP/SFTP
- If/Else
- Image Recognition
- Insert Keystrokes
- Insert Mouse Click
- Insert Mouse Move
- Insert Mouse Scroll
- Internet Connection
- Launch Website
- Log To File
- Loop
- Manage Windows
- Message Box
- Open

Task Actions

NORMAL VISUALIZE

Undo Redo Edit Delete Copy Paste Action

FILTERS ☒ Mouse Moves ☒ Keystrokes ☒ Mouse Clicks ☒ Delays ☒ Other Windows UI

Find Text...

1 Open: "Notepad.exe"

2 Delay: (1000 ms)

3 Keystrokes: [SHIFT DOWN][SHIFT UP][SHIFT DOWN][SHIFT UP]ask[SHIFT DOWN];[SHIFT UP] in "Untitled - Notepad"

4 Keystrokes: [ENTER] in "Untitled - Notepad"

5 Keystrokes: [ENTER] in "Untitled - Notepad"

6 Keystrokes: [SHIFT DOWN]d[SHIFT UP]emonstrates[SHIFT DOWN];[SHIFT UP] [ENTER] in "Untitled - Notepad"

7 Keystrokes: [TAB] in "Untitled - Notepad"

8 Keystrokes: [SHIFT DOWN]f[SHIFT UP]iles/folders commands[ENTER] in "Untitled - Notepad"

9 Keystrokes: [TAB] in "Untitled - Notepad"

10 Keystrokes: [SHIFT DOWN][SHIFT UP]oop and conditional commands.[ENTER] in "Untitled - Notepad"

11 Keystrokes: [TAB] in "Untitled - Notepad"

12 Keystrokes: [SHIFT DOWN]a[SHIFT UP]vanced capabilities to create filenames based on current

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14 Keystrokes: [SHIFT DOWN]a[SHIFT UP]s the task runs the actions as listed in this notepad file fo

15 Keystrokes: [ENTER] in "Untitled - Notepad"

16 If Folder Exists ("C:\Automation-Anywhere-Temporary-Folder") Then

17 Comment: Before we start the task, we will delete the folder if it already exists

18 Delete Folder "C:\Automation-Anywhere-Temporary-Folder"

19 End If

20 Create Folder "C:\Automation-Anywhere-Temporary-Folder"

21 Keystrokes: 1. [SHIFT DOWN][SHIFT UP]older [SHIFT DOWN]c[SHIFT UP]reated[SHIFT DOWN];

22 Keystrokes: [SHIFT DOWN]9[SHIFT UP][SHIFT DOWN]u[SHIFT UP]sed '[SHIFT DOWN][SHIFT UP]

23 Keystrokes: [ENTER] in "Untitled - Notepad"

24 Delay: (1000 ms)

Local Variables

- my-list-variable
  - Type: List
  - Option: Value
  - Value: my-value-1, my-value-2
- Prompt-Assignment
  - Type: Value
  - Option: Value
  - Value: Test-Value

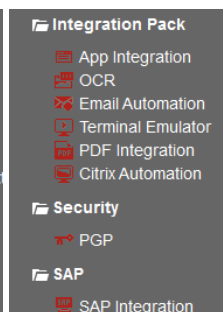
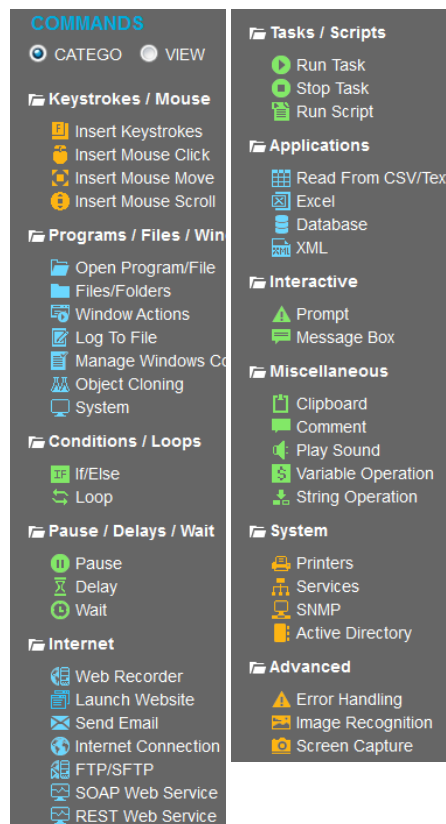
ERROR VIEW

VARIABLE MANAGER

Copy Copy All Paste Add Edit Delete Show System Variables



# 500+ Bot Commands Available



## Key Key strokes / Mouse

- Edit mouse moves and key strokes

## Program / Files / Windows

- Interact with Windows OS elements (files, windows, etc..)

## Conditions / Loops

- Add programming construct

## Pause / Delays / Wait

- Wait for window to show up before clicking on it

## Internet

- Start Web browser window, upload a file, call REST API...

## Tasks / Scripts

- Interact with recorded tasks

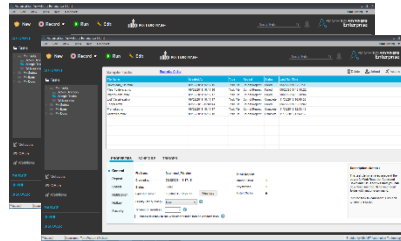
## Applications

- Interact with applications (DB/Excel) and files (XML/CSV)

- **Interactive**
  - Insert message box, get input
- **Miscellaneous**
  - Variable or Clipboard, String operations,
- **System**
  - Printers, Services, LDAP
- **Advanced**
  - Fault handlers, Image processing
- **Integration Pack**
  - Work with PDF, receive emails,
  - App Integration and **Terminal Emulator**
- **Security**
  - Encrypt / decrypt files
- **SAP**
  - Work with SAP GUI

# Deploying a Task Bot

## Client - Bot Creators



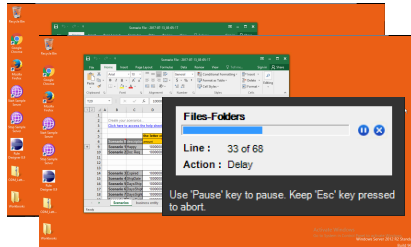
Tasks Copied from  
Control Room



Tasks Copied to  
Control Room



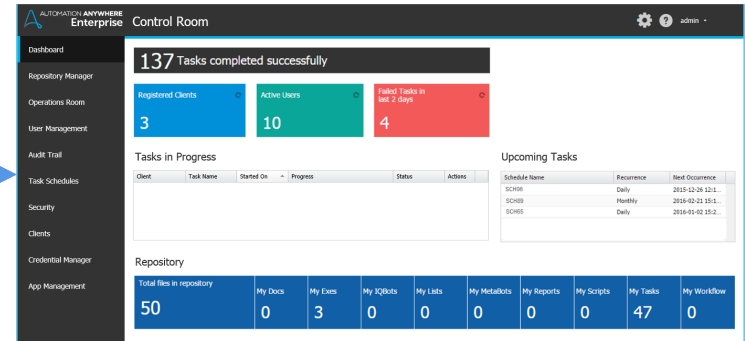
## Client - Bot Runners



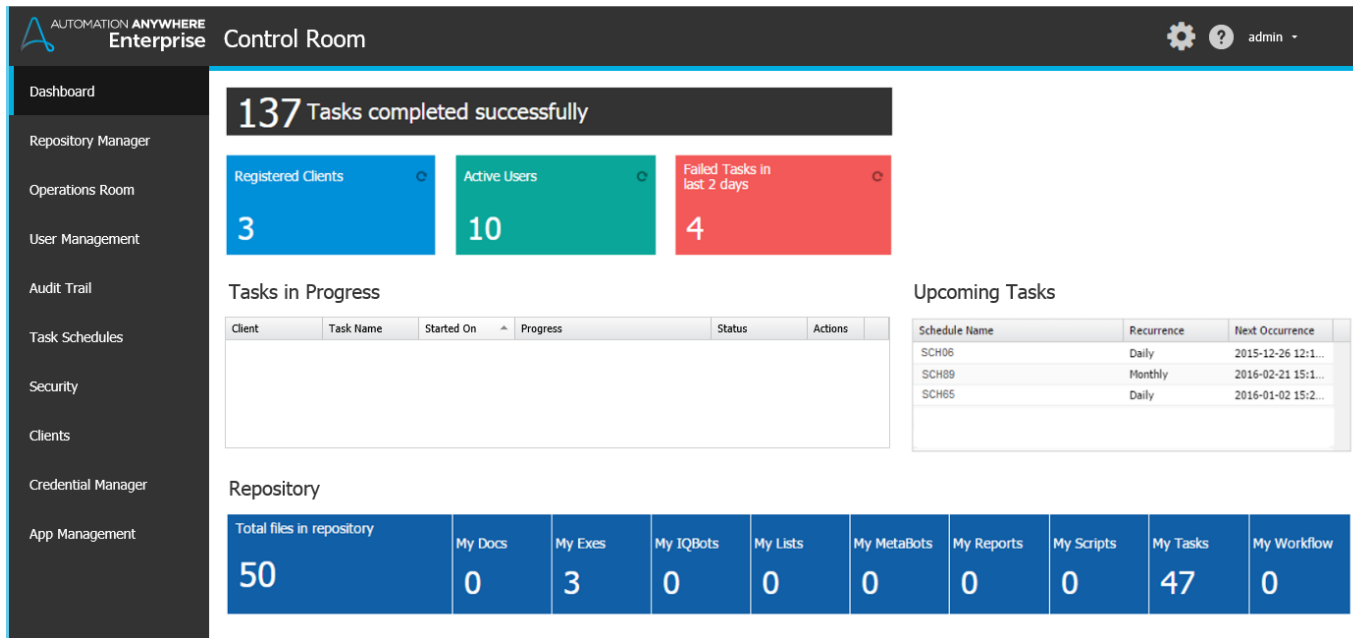
Tasks Deployed  
from Control  
Room



## Control Room - Bot Management and Deployment

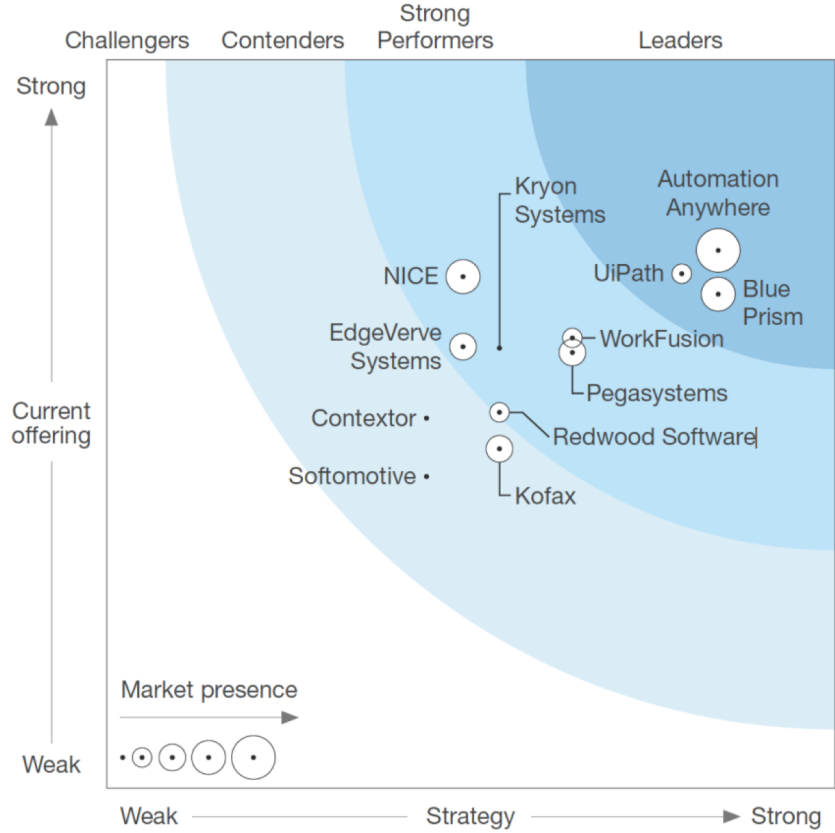


# Control Room – Bot and User Management Console



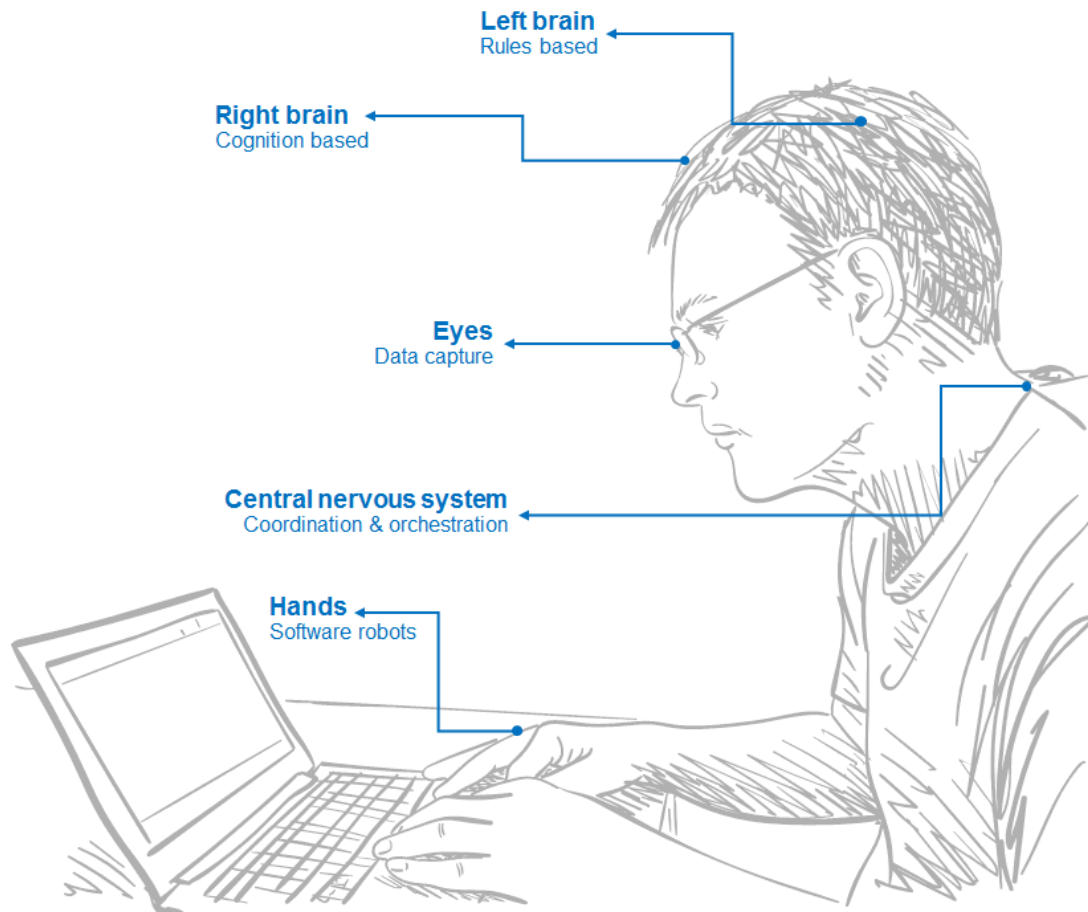
- **Dashboard** to view Bot activities
- **Repository Manager** to manage uploaded Bots
- **Task Scheduler** to deploy Bots to Bot Runners and manage Bot dependencies
- **Operation Room** to view the control room history and tasks in progress.
- **User Management** to configure users (developers, bot runners, administrators)
- **Audit Trail** to display all Control Room events

# Analyst View



# Beyond Task Automation: Digital Labor

Our mission is to  
extend humans  
with **digital labor** to  
enable businesses  
to scale



# Use Case: Data Collection

A bot can read from ...

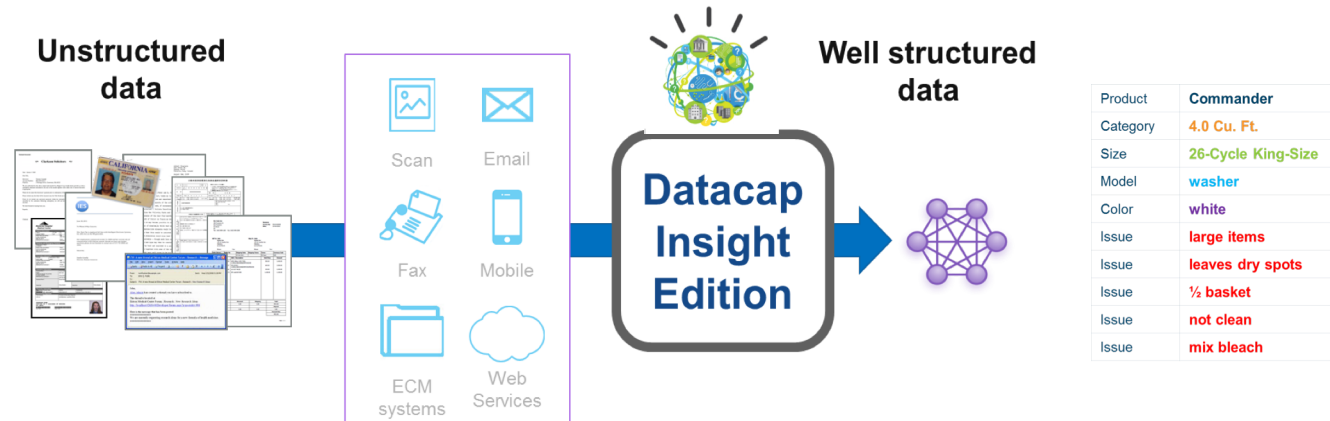
- Databases
- CSV files
- PDF files
- Web Application screens (no API needed)
- Thick Client application (without API)
- Host terminals
- ... And even from unstructured information

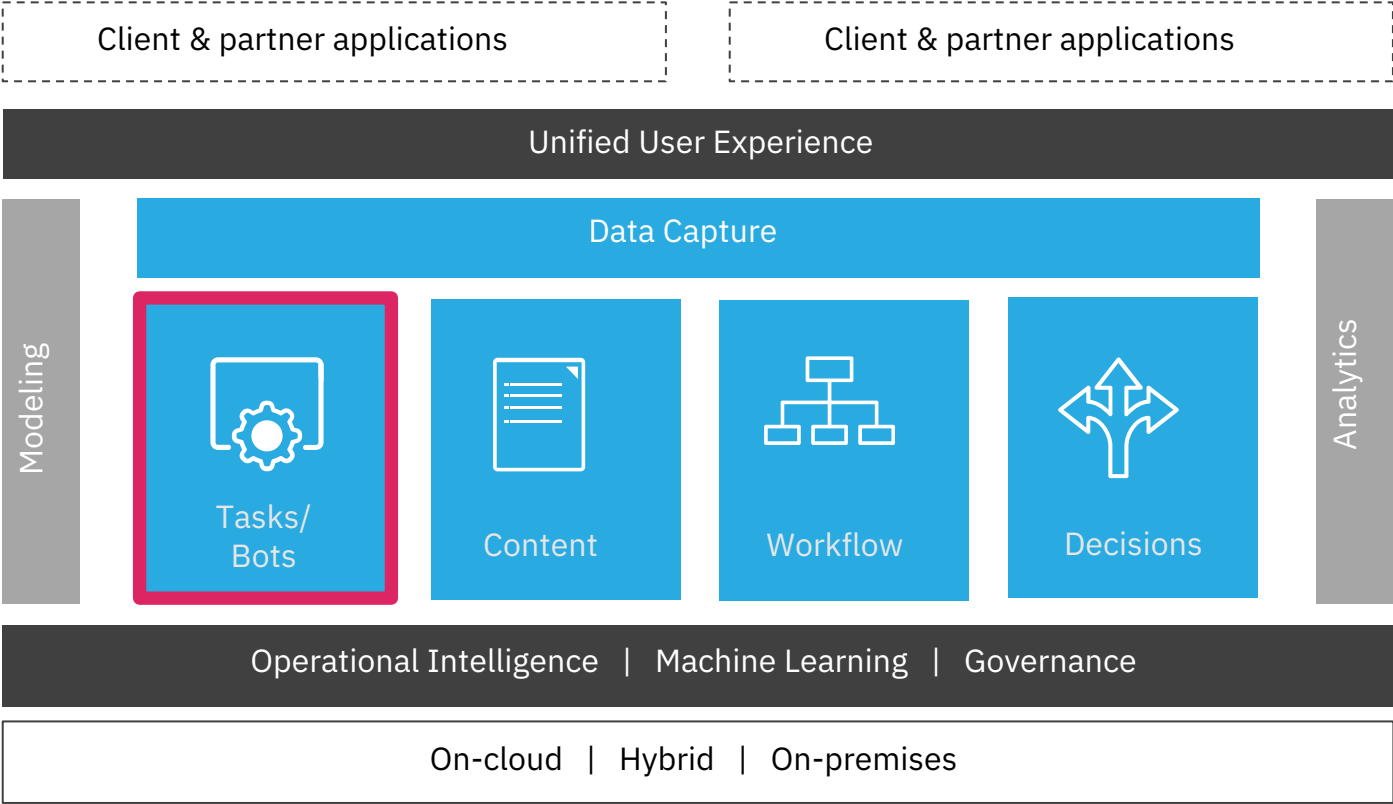


# Extracting Data from Unstructured Information

IBM Datacap efficiently captures, accesses, analyzes critical transactional business content, producing clean structured data that robots need to operate continuously and efficiently.

- Feeds data to robots from non-digital channels like mail, fax, email and mobile capture
- Digitizes and extracts data with cognitive capture
- Identifies errors before they get to the bots, minimizing exceptions







# Join a free test drive of IBM Robotic Process Automation!

On [Cloud Garage](#)

