

Automating Tasks Using IBM Robotic Process Automation with Automation Anywhere

WB502 (Classroom)

ZB502 (Self-paced)

Course description

This course is intended to teach the skills that are needed to work with the IBM Robotic Process Automation (RPA) with Automation Anywhere Enterprise Client and Control Room to develop and manage bots. The course covers the development of both Meta bots and Task bots but focuses mostly on Task bot development.

The course uses an interactive learning environment, with hands-on exercises to reinforce concepts and check understanding. Lab exercises throughout the course provide hands-on experience with developing robotic tasks.

The course introduces robotic process automation, typical use cases, challenges, good practices and high-level architecture of the IBM Robotic Process Automation with Automation Anywhere product. The emphasis of the course is in hands-on coding in the development environment (Workbench).

Development is performed using the most common bot commands. Bots are built to accomplish everyday business challenges including extracting data from various sources, writing data to various sources, conditional processing, and looping. The course also covers the use of various Recorders to record user interactions.

At the completion of the course, the student is encouraged to take a Badge test to earn the *Automating Tasks Using IBM Robotic Process Automation with Automation Anywhere V11* badge.

For information about other related courses, see the IBM Training website:

**ibm.com**/training

General information

Delivery method

Classroom or self-paced virtual classroom (SPVC)

Course level

ERC 3.0

Product and version

IBM Robotic Process Automation with Automation Anywhere

Audience

This course is intended for developers who use IBM Robotic Process Automation with Automation Anywhere.

Learning objectives

After completing this course, you should be able to:

* Describe the IBM Robotic Process Automation with Automation Anywhere Control Room and Enterprise Client
* Understand challenges and risks when implementing robotic process automation
* Describe common use cases for robotic process automation
* Explain robotic process automation and when to use it
* Describe the main components of the product
* Perform basic Bot management and administration
* Learn the benefits of using Bot Insights
* Understand the high-level architecture and topology
* Understand workload management and when to use queues, work items, and device pools
* Understand the difference between attended and unattended bot runners and when to use each

You will also learn how to develop bots to accomplish common business scenarios including:

* Capturing user interactions using appropriate Recorders
* Developing attended bots to aid end-user work
* Developing unattended bots with pre-configured triggers
* Running bots from the Workbench and the Control Room
* Using and assigning user and system-defined variables
* Creating a Meta bot to handle an application login
* Integrating with common desktop applications
* Writing data from a text file to an Excel spreadsheet
* Copying spreadsheet data to a Windows application
* Reading and writing from a DB2 database
* Hardening bots against common exceptions
* Debugging bots using the debugging feature
* Applying good practices for coding bots
* Handling corrupt data or an incorrect file
* Extracting data from web pages
* Performing basic string operations
* Sending and receiving emails
* Downloading email attachments
* Extracting data from Adobe PDFs
* Implementing conditional logic
* Adding interactive components
* Calling REST web services
* Basic arithmetic operations
* Defining bot triggers
* Iterative looping
* Error handling

Prerequisites

* Practical knowledge of data structures
* Understanding of SQL syntax
* Basic understanding of web services
* Experience with modern programming techniques

Duration

5 days

Skill level

Intermediate

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| Classroom (ILT) setup requirements | |
| Processor | Intel Xeon 2.0 GHz or faster, 2 CPUs |
| GB RAM | 16 |
| GB free disk space | 120 |
| Network requirements | None |
| Other requirements | None |

Notes

The following unit and exercise durations are estimates and might not reflect every class experience. If the course is customized or abbreviated, the duration of unchanged units will probably increase.

This course is an updated course to WB502 ERC 2.0.

Course agenda

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| Course introduction  Duration: 15 minutes |

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| Unit 1. Introducing robotic process automation and bots  Duration: 30 minutes | |
| Overview | In this unit, you learn about robotic process automation (RPA) and what RPA bots can do. |
| Learning objectives | After completing this unit, you should be able to:   * Describe robotic process automation (RPA) * Describe an RPA bot |

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| Unit 2. Introducing IBM Robotic Process Automation with Automation Anywhere  Duration: 1 hour | |
| Overview | In this unit, you learn about IBM Robotic Process Automation with Automation Anywhere with an introduction to the Control Room. |
| Learning objectives | After completing this unit, you should be able to:   * Describe the main components and features of IBM Robotic Process Automation with Automation Anywhere * Explain the client/server architecture model that IBM Robotic Process Automation with Automation Anywhere uses * Describe the Control Room and its features |

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| Exercise 1. Exploring the Control Room  Duration: 30 minutes | |
| Overview | In this exercise, you learn how to start and navigate the different IBM Robotic Process Automation with Automation Anywhere components. |
| Learning objectives | After completing this exercise, you should be able to:   * Describe the features of the Control Room * Create an IBM Robotic Process Automation with Automation Anywhere user and allocate an appropriate license for that user |

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| Unit 3. Introducing the Enterprise Client  Duration: 1 hour | |
| Overview | This unit provides an overview of the Enterprise Client. |
| Learning objectives | After completing this unit, you should be able to:   * Describe the main features of the Enterprise Client * Explain the difference between the Web Recorder and the Smart Recorder * Explain how to work with the Commands list * Describe good practices for coding bots |

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| Exercise 2. Creating a basic bot  Duration: 45 minutes | |
| Overview | This exercise introduces you to the IBM Robotic Process Automation with Automation Anywhere Enterprise Client interface. You also learn how to create a basic bot. |
| Learning objectives | After completing this exercise, you should be able to:   * Explore the Enterprise Client interface * Work with the Workbench to add and edit bot commands * Create a bot that opens a text editor, creates a text file, and saves the file |

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| Unit 4. Working with variables, loops, and strings  Duration: 1 hour | |
| Overview | In this unit, you learn about the IBM RPA with Automation Anywhere implementation of variables and loops, and how they are defined in the Workbench bot coding environment. You learn how to work with data through String Operation commands, and how to use Excel commands to work with spreadsheets. You are also introduced to the exercise case study. |
| Learning objectives | After completing this unit, you should be able to:   * Explain how to define and use variables * Describe how to set up and use the Loop commands to automate repetitive tasks * Describe how to use the String Operation commands to work with string data * Explain how to use Excel commands to work with spreadsheets |

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| Exercise 3. Writing data from a text file to an Excel spreadsheet  Duration: 1 hour and 45 minutes | |
| Overview | In this exercise, you learn how to define custom variables, set up a loop, and work with strings to transfer data from one file to another. |
| Learning objectives | After completing this exercise, you should be able to:   * Work with the Variable Manager to add custom variables * Configure a basic loop for iterating through a text file and a spreadsheet * Use String Operation commands to work with text string data |

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| Unit 5. Working with the Smart Recorder and the Object Cloning command  Duration: 1 hour | |
| Overview | In this unit, you learn how to work with the Smart Recorder and the Object Cloning command to capture and edit bot interactions with other applications. |
| Learning objectives | After completing this unit, you should be able to:   * Describe how to capture bot interactions with the Smart Recorder * Describe how to capture bot interactions with the Object Cloning command * Explain how to edit Object Cloning commands in the Workbench |

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| Exercise 4. Automating data entry to a business application and a database  Duration: 2 hours | |
| Overview | In this exercise, you build a bot that copies customer data from a spreadsheet and enters the data into both a Windows-based business application and a separate database. |
| Learning objectives | After completing this exercise, you should be able to:   * Use the Smart Recorder and the Object Cloning command to capture interface components and actions * Work with variables to pass data between different applications * Build loops to automate repetitive tasks across several different applications * Use the Object Cloning command and the String Operation command to capture and extract data from a message window |

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| Unit 6. Working with emails, conditional logic, and triggers  Duration: 1 hour | |
| Overview | In this unit, you learn how to configure schedules and triggers to bots so they run automatically. |
| Learning objectives | After completing this unit, you should be able to:   * Enable a bot to send email * Explain how to implement conditional logic * Use the clipboard * Concatenate variables * Work with nested loops * Describe how to use a bot trigger * Describe how to use debugging |

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| Exercise 5. Creating a bot to sum check declines, query a database, and send an email  Duration: 2 hours | |
| Overview | In this exercise, you learn how to trigger a bot that opens a CSV file, queries a database, and sends an email. |
| Learning objectives | After completing this exercise, you should be able to:   * Extract values from files * Use variables to perform calculations * Work with the Email command * Configure a bot trigger |

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| Unit 7. Working with email and PDFs  Duration: 1 hour | |
| Overview | This unit covers how to implement conditional (if/else) logic in a bot to handle different situations. |
| Learning objectives | After completing this unit, you should be able to:   * Download an attachment from an email * Extract data from a PDF file * Work with extracted text strings * Determine the length and value of variables |

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| Exercise 6. Creating a bot to evaluate data from a PDF and send an email  Duration: 2 hours | |
| Overview | In this exercise, you implement conditional logic and work with email triggers. You learn how to download attachments and extract data from a PDF and validate content. |
| Learning objectives | After completing this exercise, you should be able to:   * Automate the download of email attachments * Extract data from a PDF by using custom form fields * Implement conditional (If/Else) logic in a bot * Configure an email trigger to run the bot |

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| Unit 8. Developing attended bots  Duration: 1 hour | |
| Overview | This unit covers how to add interactive elements, such as message windows and text entry prompts, to a bot. |
| Learning objectives | After completing this unit, you should be able to:   * Describe the interactive components that you can configure in a bot * Describe how to implement interactive components in a bot |

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| Exercise 7. Creating an attended bot to check values in disparate systems  Duration: 1 hour and 30 minutes | |
| Overview | In this exercise, you learn how to add interactive components, such as text entry windows, to a bot. You also learn how to use the Web Recorder to work with web page data. |
| Learning objectives | After completing this exercise, you should be able to:   * Create interactive prompts in bots * Use the Web Recorder to extract web page data |

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| Unit 9. Introducing MetaBots  Duration: 1 hour | |
| Overview | This unit provides an overview of MetaBots and the MetaBot Designer. |
| Learning objectives | After completing this unit, you should be able to:   * Describe how to use MetaBots * Describe the features and components of the MetaBot Designer * Explain how to create a MetaBot |

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| Exercise 8. Creating a login MetaBot  Duration: 30 minutes | |
| Overview | This exercise introduces you to MetaBots. |
| Learning objectives | After completing this exercise, you should be able to:   * Create a MetaBot to handle application login * Reuse the login MetaBot in an existing bot |

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| Unit 10. Working with web services  Duration: 1 hour | |
| Overview | This unit describes how to work with web services. |
| Learning objectives | After completing this unit, you should be able to:   * Call web services in a bot |

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| Unit 11. Exceptions and error handling  Duration: 1 hour | |
| Overview | This unit provides an overview of some of the basic error handling features that you can use in a bot. |
| Learning objectives | After completing this unit, you should be able to:   * Add error handling to a bot * Evaluate error codes that are received in a web service * Display a variable as currency |

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| Exercise 9. Working with web services and error handling  Duration: 2 hours and 30 minutes | |
| Overview | This exercise demonstrates the use of advanced features, such as a REST web service calls and error handling. |
| Learning objectives | After completing this exercise, you should be able to:   * Implement basic error handling in a bot * Work with a REST service to incorporate web service data in a bot * Implement more complicated conditional (If/Else) logic in a bot |

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| Unit 12. Hardening bots against exceptions  Duration: 1 hour | |
| Overview | In this unit, you learn good practices for defensively coding bots against exceptions. |
| Learning objectives | After completing this unit, you should be able to:   * Describe good practices for hardening bots against exceptions |

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| Exercise 10. Hardening the Account Opening bot  Duration: 2 hours and 30 minutes | |
| Overview | This exercise demonstrates how to “harden” a bot against potential failure points and implement error handling. |
| Learning objectives | After completing this exercise, you should be able to:   * Implement bot commands that harden the bot against anticipated failure points and known issues that can affect successful task automation * Implement Error Handling commands that address specific error situations * Create a reusable error handling bot |

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| Unit 13. Bot management and reporting  Duration: 1 hour | |
| Overview | This unit describes bot management features in the Enterprise Client. |
| Learning objectives | After completing this unit, you should be able to:   * Deploy bots with dependencies * Manage bots in the Enterprise client * Monitor bot performance in the Enterprise client * Use the Report Designer to create performance reports |

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| Exercise 11. Managing bots  Duration: 1 hour | |
| Overview | This exercise demonstrates how to create dependencies between bots so that one bot can run other bots and pass parameters. You are also introduced to bot management features in the Enterprise Client. |
| Learning objectives | After completing this exercise, you should be able to:   * Create dependencies between bots * Pass parameters from one bot to another * Upload bots to the Server Repository and compare bot code * Use bot management tools in the Enterprise Client |

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| Unit 14. Administering bots through the Control Room  Duration: 1 hour | |
| Overview | In this unit, you learn about the bot administration features in the Control Room. You learn how administrators can use the Repository Manager, Operations Room, and Audit Trail to manage bots and view operational data about bot performance and Control Room events. |
| Learning objectives | After completing this unit, you should be able to:   * Describe how to manage bot workload using bot runners, device pools and queues. * Explain how to run and schedule bots from the Control Room * Describe how to monitor bot performance using Bot Insights * Understand bot lifecycle management |

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| Exercise 12. Administering bots in the Control Room  Duration: 30 minutes | |
| Overview | This exercise provides an overview of central bot administration tasks that you can configure and access through the Control Room. You learn about how an administrator can use various Control Room features to manage, schedule, and run bots on Bot Runner machines. |
| Learning objectives | After completing this exercise, you should be able to:   * Upload bot files to the Control Room. Run bots from the Control Room on a bot runner machine * View the status of bots in various phases (completed, running, scheduled) |

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| Unit 15. Course summary  Duration: 30 minutes | |
| Overview | This unit summarizes the course and provides information for future study. |
| Learning objectives | After completing this unit, you should be able to:   * Explain how the course met its learning objectives * Access the IBM Training website * Identify other IBM Training courses that are related to this topic * Locate appropriate resources for further study |

For more information

To learn more about this course and other related offerings, and to schedule training, see **ibm.com**/training

To learn more about validating your technical skills with IBM certification, see **ibm.com**/certify

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