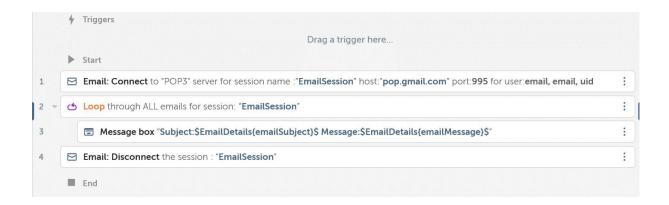
- 1. Design and create a bot to automate tasks of
 - A. Reading emails from inbox and displaying its Subject and Message
 - B. Sending a mail
 - C. Replying to unread mail from mail inbox

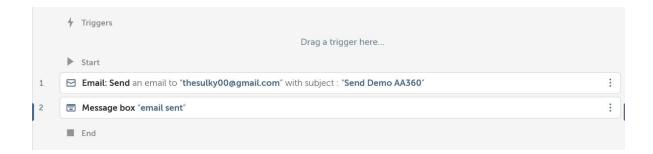
Bot for Reading emails:

- MAKE CREDENTIALS WITH 2 ATTR. USERNAME & PASSWORD (APP PASSWORD)
- 2. EMAIL CONNECTION (SESSION NAME) INSERT APPROPRIATE INFORMATION FOR CONNECTION AND FETCH USERNAME AND PASSWORD VIA CREDENTIALS FEATURE.
- 3. LOOP: FOR EACH MAIL IN THE MAILBOX
 - a. ASSIGN THE CURRENT VALUE TO A DICTIONARY (CREATE NEW).
 - b. MESSAGE BOX TO FETCH DETAILS OF THE MAIL USING THE SEVERAL INDEX OPTIONS OF THE ABOVE-CREATED DICTIONARY.
- 4. EMAIL DISCONNECT (SESSION NAME)



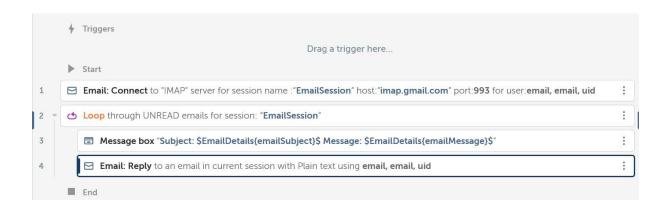
Bot for Sending Mail:

- 1. EMAIL SEND ACTION REQUIRES 'TO'; 'SUBJECT'; 'MESSAGE'
- 2. WILL REQUIRE THE APPROPRIATE AUTHENTICATION DETAILS DEPENDING ON THE CONNECTION METHOD YOU WOULD LIKE TO USE.



Bot for Replying to Mail:

- 1. FOLLOW THE SAME INSTRUCTIONS TO CONNECT AS THE 1ST BOT.
- 2. MENTION THE APPROPRIATE SETTINGS REQUIRED FOR AUTHENTICATION
- 3. LOOP: FOR EACH MAIL IN THE MAILBOX
 a. REPLY–REQUIRES EMAIL BODY, AND APPROPRIATE AUTHENTICATION INFORMATION.

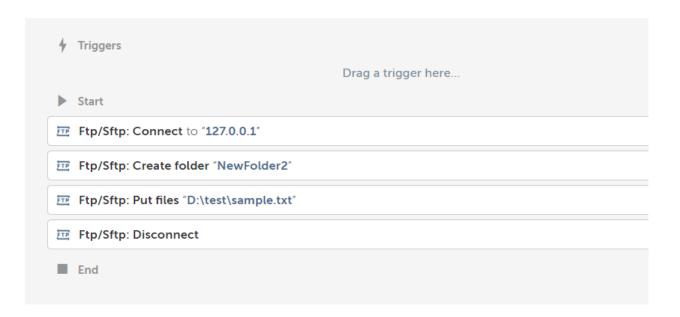


2. Design and create a bot to create a folder and transfer files to a server.

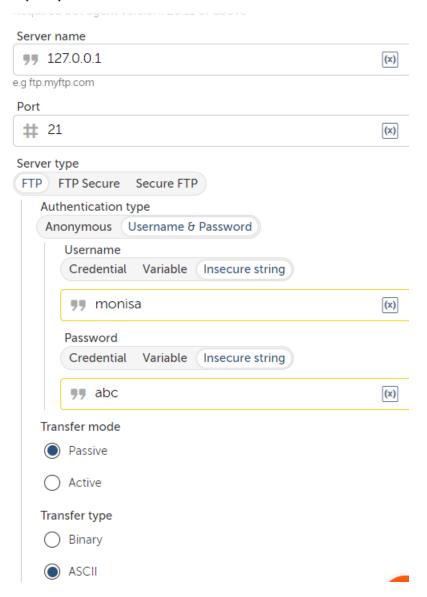
Bot Basic Algorithm:

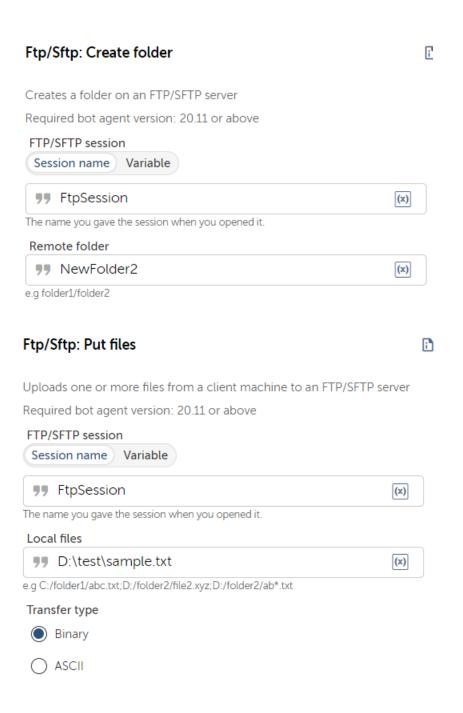
- 4. Establish a connection with the FTP/SFTP server using the Connect action. When establishing a connection, associate the FTP/SFTP server details with a session name. Use the same session name for all corresponding actions.
- 5. Use the FTP/SFTP actions to automate a task. The actions enable you to perform the following tasks:
 - a. Upload, download, delete, or rename files.
 - b. Upload, download, create, or delete folders.

- c. Navigate to the parent folder or a specific folder.
- 6. After you have automated the tasks related to FTP / SFTP, terminate the connection to the server using the Disconnect action.
- 7. Double-click or drag the Connect action from the FTP/SFTP node in the Actions palette.
- 8. Enter a name for the session in the Session name field.
- 9. Enter the FTP/SFTP server name in the Server name field.
- 10. Specify the port number.
- 11. Select one of the following options to specify the server type
- 12. Select Reconnect if the connection fails if you want to automatically reconnect: A. Specify the number of attempts in the Attempts field. B. Select the time lapse in the Time between attempts field.
- 13. Click Save.



Ftp/Sftp: Connect







3. Design and create a bot to automate tasks of SOAP web services to add two numbers

http://www.dneonline.com/calculator.asmx?WSDL

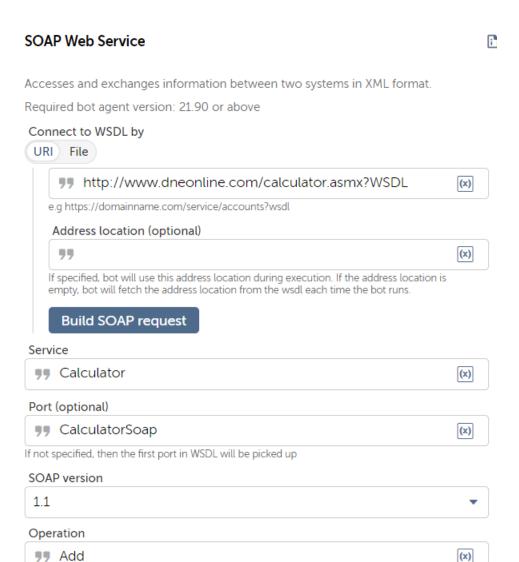
http://www.dneonline.com/calculator.asmx

Basic Algorithm:

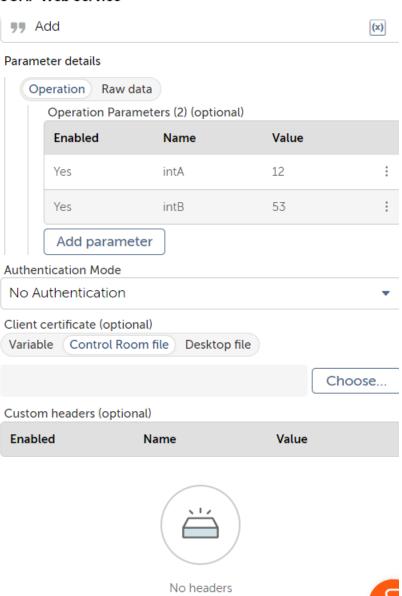
- 1. Double-click or drag the SOAP Web Service command to the Task Actions List.
- 2. The SOAP Web Service window appears.
- 3. Enter a complete Uniform Resource Identifier (URI), or click Build URI to build a customized WSDL URI.
- 4. The Build Web Service URI window appears.
- 5. In the Build Web Service URI window, do the following:
- 6. Enter the WSDL URI.
- 7. You can enter the URI or insert a variable by pressing the F2 function key.
- 8. Click Connect.
- 9. After the connection is established, the Services, Port, Soap Versions, and Operations fields are auto-populated with options to select.
- 10. Select Services.
- 11. Select Port.
- 12. The default port is selected when you click Connect. Note that a port is not available for selection if the WSDL does not support a port.
- 13. Select Operations.
- 14. If the selected Operation has parameters, the parameters are populated in the table with their Name, Type, and Value. You can Add, Update, or Delete the parameters for a particular operation.
- 15. Enable the Raw Data Parameter(s) option to specify the input in XML format.
- 16. Default: To use the same service endpoint URI as the WSDL URI.

- 17. Dynamic: To use the service endpoint URI that is read dynamically from the WSDL file during task execution.
- 18. Static: To use the service endpoint URI that is generated at the time of creating a bot. In this case, the same service endpoint URI is used to run all the tasks. The variables are not evaluated during task execution.
- 19. Note: If you change the settings for an existing bot from the Default to Static service endpoint, you must Save the configurations to reload the associated WSDL and do not need to select Connect.
- 20. Click Save.

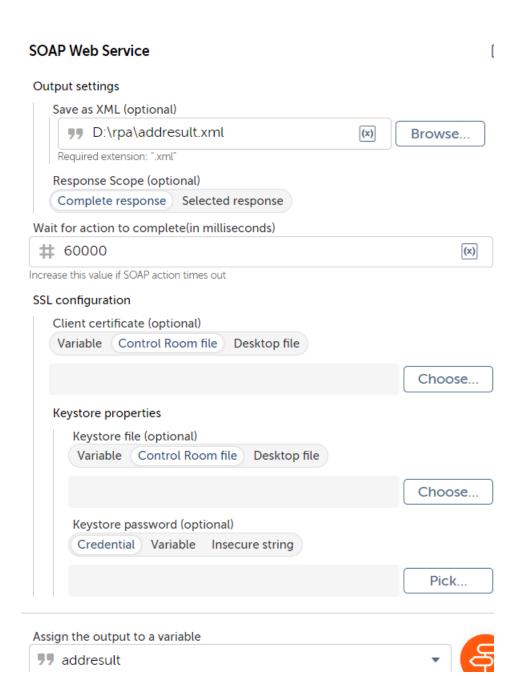




SOAP Web Service



Add header



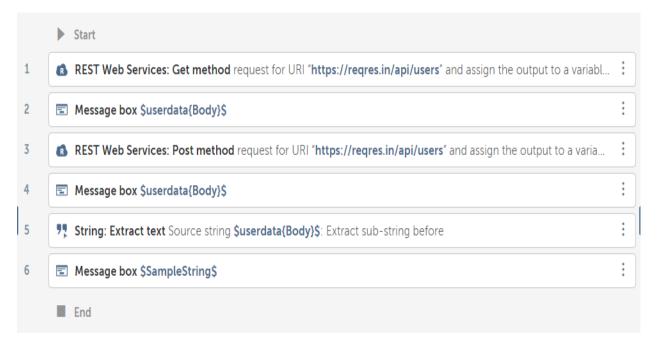
Message box	
Inserts a mossage box to show a mossage when the task runs	
Inserts a message box to show a message when the task runs	
Required bot agent version: 20.11 or above	
Enter the message box window title	
99 Automation Anywhere Enterprise Client	(x)
Enter the message to display	
•• \$addresult\$	x)
Scrollbar after lines	
# 30	x)
Close message box after	
Seconds	
# Required	

4. Design and create a bot to automate tasks of RESTFul web service to fetch, add JSON data from the server.

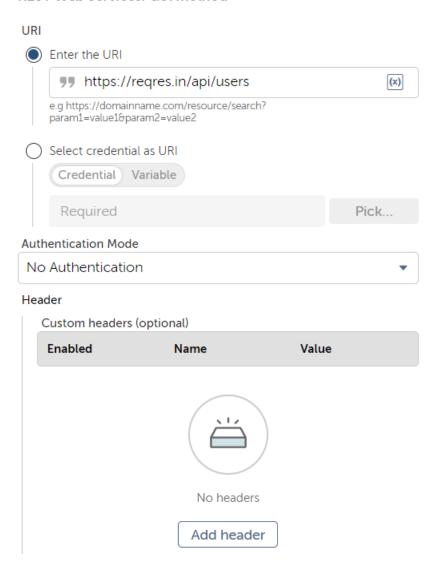
Basic Algorithm:

- 1. 1.Enter the URI: A unique address for an API resource.
- 2. Authentication Mode: There are three supported authentication modes:
- 3. No Authentication: Use this option to access the endpoints that do not require authentication to access their servers.
- 4. Basic: Basic is the simplest way to authenticate users. When you select this option, you will enter the username and password. This technique uses a header called Authorization, with a base64 encoded representation of the username and password entered.
- 5. Logged-in AD User: Active Directory (AD) users that are authorized to access the related API are authenticated through AD. No credentials are required in the request.
- 6. Windows NT LAN Manager (NTLM) Authentication (AD User): A challenge/response authentication method that allows clients to provide their username and password as encrypted credentials or plain text. We recommend that you use credentials that are stored in the Automation Anywhere Credential Vault.
- 7. Header: Not all methods require a header. Headers represent the metadata associated with the request.
- 8. Content type: When a header contains a content type, it defines the content negotiation between the client and the server. REST Web Service actions support the following content types:
- 9. application/x-www-form-urlencoded: Encode the parameters in the URL. JSON (application/json): Enter a JSON request body. XML (application/xml): Enter an XML request body. Text (text/plain) XML (text/xml) HTML (text/html)
- 10. Multipart/form-data: Send binary data, in most cases for uploading files to the server.
- 11. Add substitution: Allows you to enter variables in the REST request body. A variable is a symbolic representation of data, and it enables you to access a value without having to enter it

- manually wherever you need it. For example, consider the following REST body request: { "Name":"{{name}}", "Email":"{{email}}", "status":"Active" }
- 12. In the above request body, you can replace the variables enclosed within double braces by clicking Add substitution and adding the required values.
- 13. Advanced options:
- 14. Capture failure response: Select the check box to capture the failure response except for the Success/Ok response. The failure response details are captured in the response body.
- 15. Allow insecure connection when using https: Select the check box to allow insecure connection when using https.
- 16. Wait for action to complete: You can set a time-out value when you send a REST request and receive a response. When performing actions such as POST, PUT, DELETE, PATCH, and GET, in the Wait for action to complete field, you can specify the wait time (in milliseconds). By default, the wait time is 60000 milliseconds.
- 17. Output variable: The response output is captured in a dictionary variable. A dictionary variable is a key-value pair. Use the response header name as key to return the header value, or "Body" as the key to return the response body.
- 18. Note: The response key with its value is available in the dictionary variable to display the response status of the REST API.
- 19. To obtain a list of the header names for the API resource, perform these steps:
- 20. Insert a Loop action after the REST Web Service action.
- 21. Select the For each key in the dictionary iterator.
- 22. In the Dictionary variable field, select the variable that holds the REST Web Service action output.
- 23. Assign the value of each key to \$prompt-assignment\$.
- 24. Insert a Log To File action.
- 25. Provide the file path to a text file to hold the list of header names.
- 26. Insert \$prompt-assignment\$ in the Enter text to log field.
- 27. Select the Overwrite existing file option.
- 28. Click Save.



REST Web Services: Get method



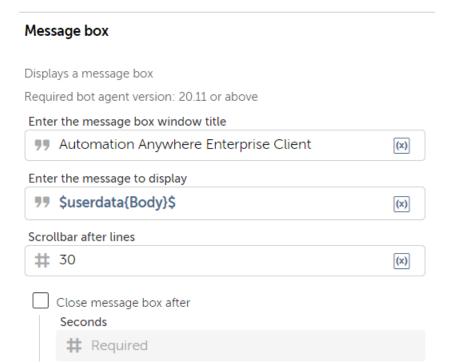
REST Web Services: Get method No headers Add header Advanced options Capture failure response Allow insecure connection when using https Warning: Transferred data may be visible to attackers Wait for action to complete (in milliseconds) ## 60000 Increase this value if GET action times out

Use response header name as key to fetch header value and 'Body' as key to fetch body of response

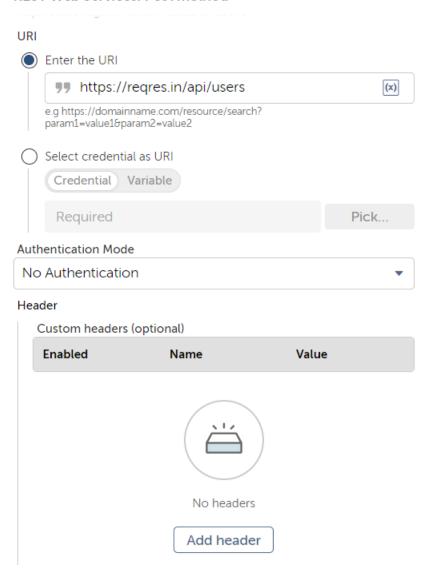
(x)

Assign the output to a variable

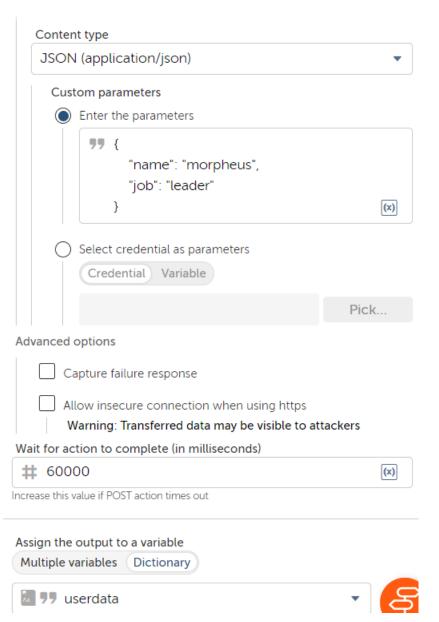
Multiple variables Dictionary



REST Web Services: Post method



REST Web Services: Post method



Message box

Displays a message box
Required bot agent version: 20.11 or above

Enter the message box window title

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Enter the message to display

79 \$userdata{Body}\$

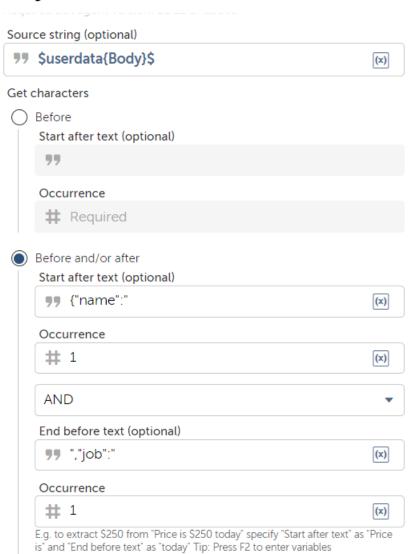
Scrollbar after lines

10 Close message box after

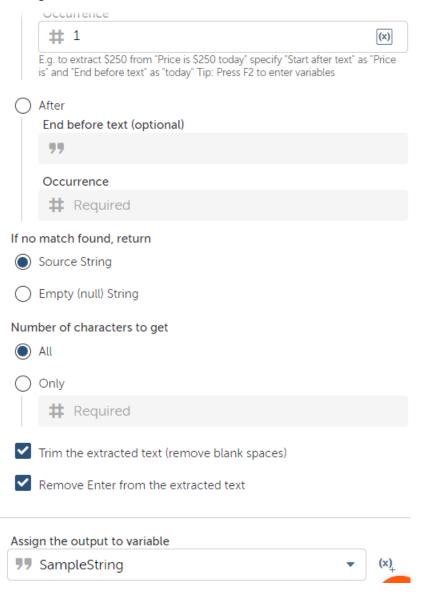
Seconds

11 Required

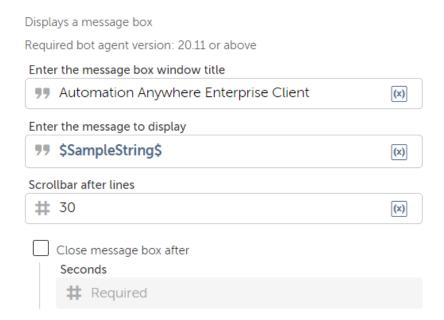
String: Extract text



String: Extract text



Message box



- 5. Write a bot to create public and private keys:
 - A. Encrypt a text file using the public key
 - B. Decrypt a text file using the private key

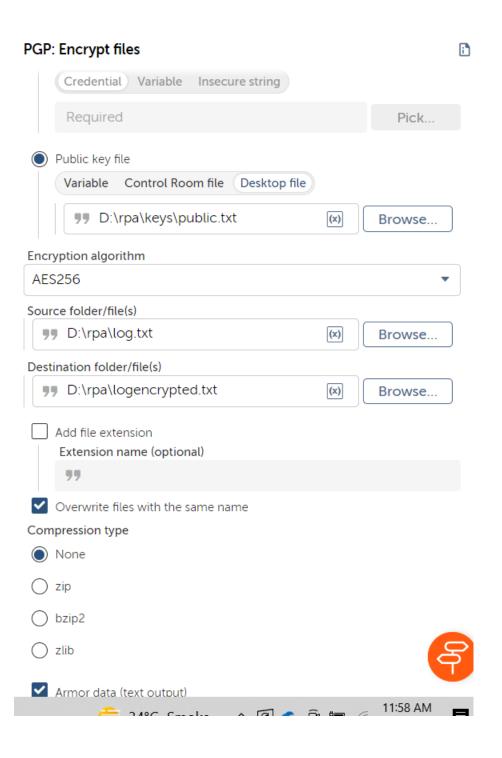


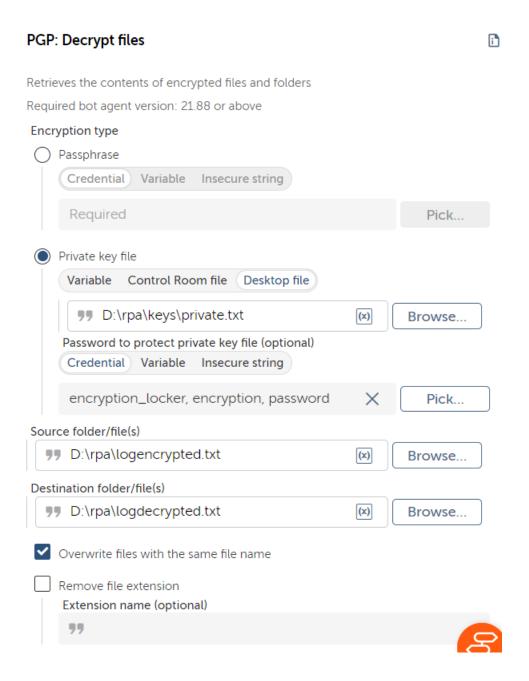
PGP: Create keys Creates a pair of public and private encryption keys Required bot agent version: 21.88 or above Location to save public key file **""** D:\rpa\keys\public.txt (x) Browse... Location to save private key file 99 D:\rpa\keys\private.txt (x) Browse... Select key size 1024 Password to protect private key file (optional) Credential Variable Insecure string

Pick...

encryption_locker, encryption, password

Overwrite files with the same file name



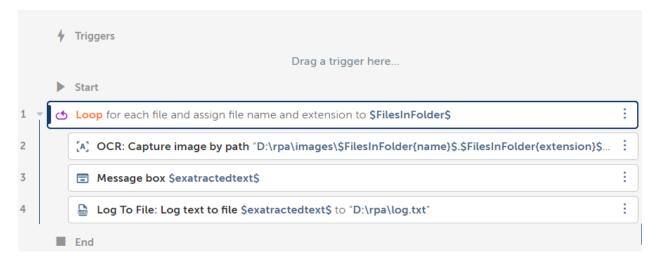


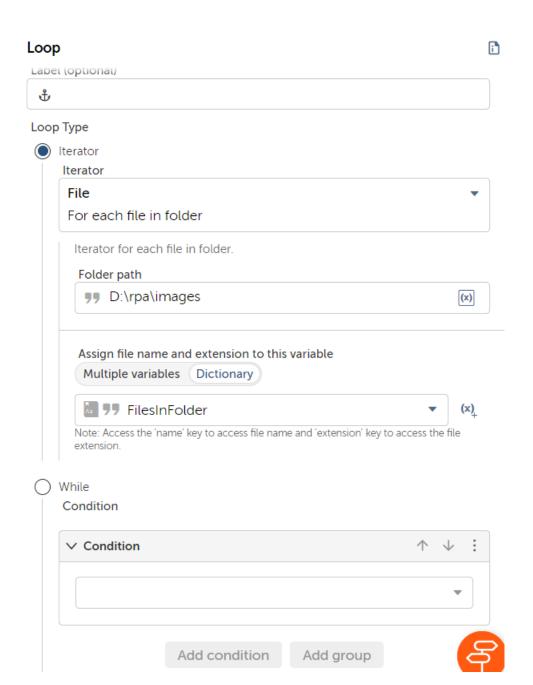
6. Design and create a bot to extract text from images using OCR. and log the text in a log file.

Basic Algorithm:

- 1. Expand the OCR node in the Commands tab.
- 2. The system displays the following operations:

- 3. Capture Window: Capture an entire window as an image.
- 4. Capture Area: Capture a specific area of an application window.
- 5. Capture Image by Path: Specify the path of the image that contains the text you want to extract.
- 6. Capture Image by URL: Specify the URL of the image.
- 7. Double-click or drag the operations.
- 8. The system displays the OCR dialog box.
- 9. Based on the sub-command you have selected, perform any of the following action:
- 10. Capture Window: Select the application window you want to capture from the list.
- 11. Capture Area:
- 12. Select the application window in which you want to specify the area to be captured.
- 13. The system displays the Capture Area option.
- 14. Click Capture Area to capture area of the selected application window.
- 15. Capture Image By Path: Specify the location of the image you want to use.
- 16. Capture Image By URL: Specify the URL of the image you want to use.
- 17. Select an OCR engine you want to use from the OCR Engine list
- 18. Click Advanced Settings.
- 19. The system displays options to specify the threshold of the image.
- 20. Select the Enable image pre-processing option if you want the system to adjust gray-scale and contrasts in the captured images
- 21. Or, clear the Enable image pre-processing option and use the Threshold slider to set the threshold value.
- 22. Click View Captured Text, to view the effect of threshold on the captured image.
- 23. Note: The system does not display captured images for preview in the Image Preview section if you have captured images in the Secure Recording mode.
- 24. Select the Filter the capture text option, to filter the captured text.
- 25. The system displays the Before and After fields.
- 26. Specify the text you want to filter out before and after the required text in the Before and After fields respectively.
- 27. Select the Trim the captured text option to trim the extra spaces in the captured text.
- 28. Select a variable from the Assign the value to an existing variable list, to assign the captured text to the variable, and then click Save.
- 29. Click Save.



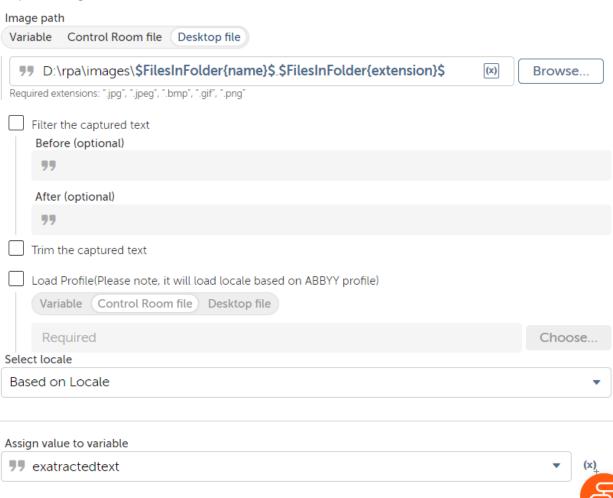


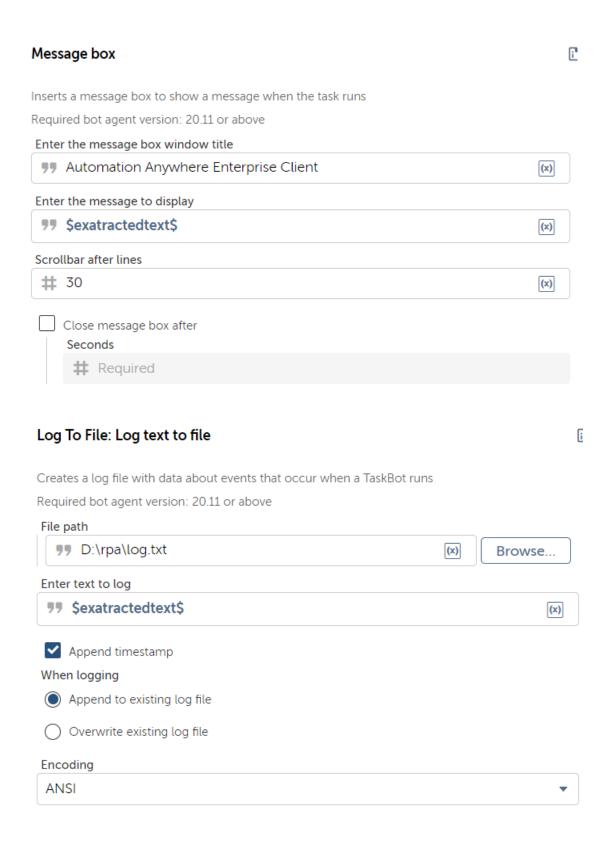
OCR: Capture image by path

Extracts text from an image on a device or a folder in the Control Room. The extracted text can assigned as a variable.

[

Required bot agent version: 21.118 or above





7. Design and create a bot to fetch the subject scores of students in Excel and display its addition.

Bot Basic Algorithm:

- 1. Double-click or drag the Open action from the Excel advanced package in the Actions palette.
- 2. Select from where you want to open the Microsoft Excel spreadsheet:
- 3. Control Room file: Enables you to open a file from the Control Room.
- 4. Desktop file: Enables you to open a file from the device. This field also accepts the file path input as a string variable or global value.
- 5. Variable: Enables you to open a file by specifying a file variable.
- 6. Select the Sheet contains a header check box if the Microsoft Excel spreadsheet contains a header row.
- 7. Select the Specific sheet name option and specify the name of the sheet to activate when the Microsoft Excel spreadsheet opens.
- 8. Select Read-only mode or Read-write mode to open the Microsoft Excel spreadsheet in read-only or edit mode respectively.
- 9. Select the Password is required check box if a password is required to open or edit the Microsoft Excel spreadsheet.
- 10. Select the Load Add-ins check box if you want to load the add-ins available in the Microsoft Excel spreadsheet.
- 11. Select the Exclude hidden sheets check box if you want to ignore the excel sheets that are hidden and do not want to perform any operation on those hidden sheets.
- 12. Select any of the following tabs to create an Excel session:
- 13. Local session: Specify a session name that can be used only in the current bot.
- 14. Global session: Specify a session name that can be used across multiple bots, such as parent bots, child bots, and other child bots of the parent bots.
- 15. You can also use the Global session option to loop through each row in an Excel advanced worksheet.
- 16. You can also close the session from the child bot when you are using the Global session option and sharing the session across child bots.
- 17. Variable: Specify a session variable that can be used to share that session with other child bots.
- 18. Click Save.

