



**Delivering Outcomes**

## **Avaya Communication Manager Reports Checklist**

**Readme**

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**Version 1.0**

**31/July/2020**

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## 1. Introduction

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*This document contains all essential information for the user to make full use of the Bot. This manual includes a description of the functions, capabilities, step-by-step procedures for setup and configuration of the Bot.*

### 1.1 Overview

Avaya Communication Manager (CM) report checklist bot is extremely beneficial for the contact center domain where daily system checks are typically performed manually. With the help of this bot the entire process will be automated without any human involvement. The bot can be scheduled to run as per business requirement on predefined intervals which can be hourly / daily / weekly or any desired interval and at the end of the execution will send a detailed report.

The bot will log into Avaya Site Administrator (ASA) version 6.0.x, connect to Avaya CM (version 6 or higher) server and download CM reports such as list history, display Alarms, display Errors and Report status socket-usage to a predefined path in the local system and close the ASA desktop-based application.

The bot will then perform the following activities:

- Copy downloaded CSV format reports into the output folder.
- Copy excel sheet from the input folder into the output folder.
- Open excel sheet and insert all the downloaded CSV format reports into the master excel sheet.
- Name it as AvayaCMMasterReportSheet.csv and save the file.
- Close excel sheet and send it through email to the respective stakeholder.

### Detailed steps are as follows:

1) Start

2) Run Meta bot logic to check if the license is expired or not

3) Reinitialize configuration file, read all the key values and store into user created variable, which can be dynamically used in the bot and there will be no tight coupling.

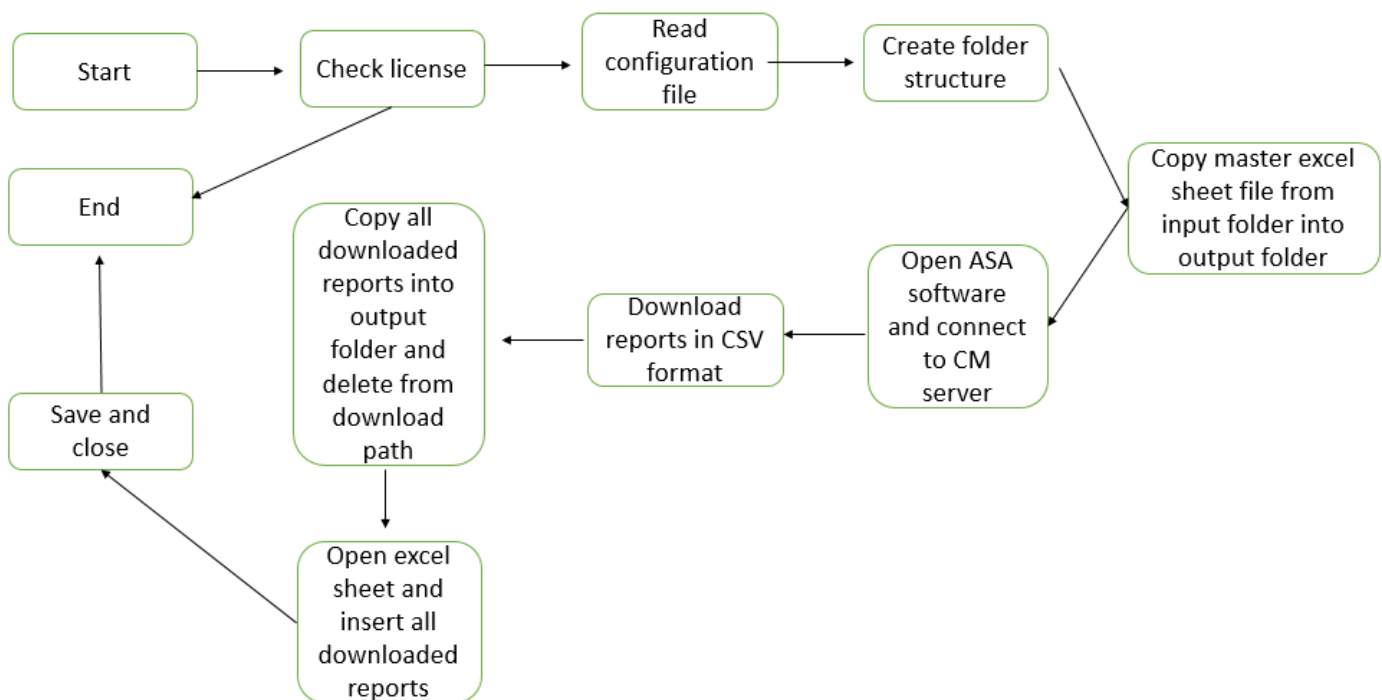
4) Create folder structure (we are creating error, log, snapshot and output folders)

5) Copy AvayaCMMasterReportSheet.xlsx file from input folder into output folder

6) Open Avaya site administrator desktop based application and connecting to CM server

- 
- 7) Downloading reports in a CSV format such as *report\_list\_history.csv*, *report\_display\_alarms.csv*, *report\_display\_errors.csv* and *report\_status\_socket-usage.csv*
  - 8) After downloading report, bot will copy downloaded reports into output folder and deleting reports from download folder
  - 9) Open excel sheet from the output folder and Insert all downloaded reports
  - 10) Save and close excel
  - 11) Send mail with final excel attachment to report email ID ex. *Botadmin@visnet.in*
  - 12) End

### Visual Flow:



- **Example of a Sample Input & Output**

**Input configuration file:-**

```
*****  
Bot & Vendor Folder Names (Case Sensitive) :  
*****
```

```
vBotName=Avaya Communication Manager Reports Checklist  
vVendorName=VIS Global Pty Ltd
```

```
*****  
Input File & Software Names (Case Sensitive) :  
*****
```

```
vAvayaCMMasterReportSheet=AvayaCMMasterReportSheet.xlsx  
vSheetName=Avaya CM Reports  
vAvayaCMSA=C:\Users\Public\Desktop\Site Administration.Ink
```

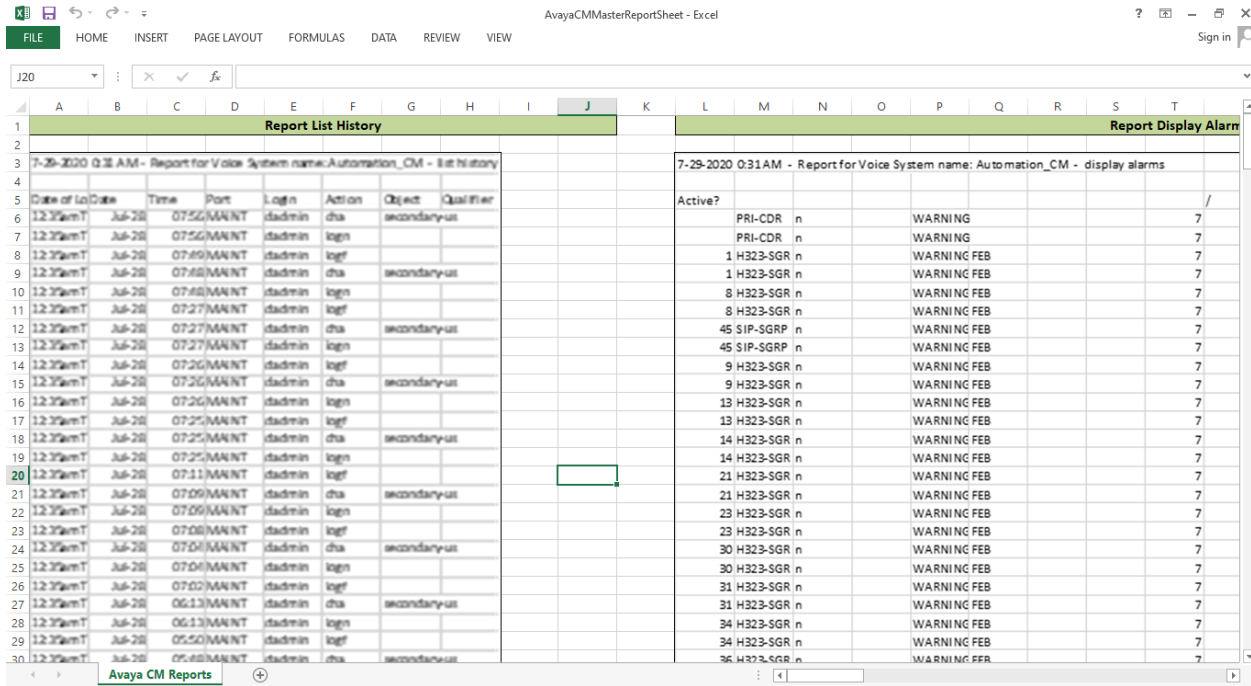
```
*****  
Delay Command : (Case Sensitive) :  
*****
```

```
vLowDelay=2  
vMidDelay=4  
vHighDelay=8  
vMsgUse=False
```

```
*****  
Output & Download File Names (Case Sensitive) :  
*****
```

```
vReportListHistory=report_list_history.csv  
vReportDisplayAlarms=report_display_alarms.csv  
vReportDisplayErrors=report_display_errors.csv  
vReportStatusSocketUsage=report_status_socket-usage.csv  
vEmailID=Botadmin@visnet.in  
vReportPath=C:\Users\VIS\AppData\Roaming\Avaya\Site Administration\user
```

## Output final report excel sheet:-



The screenshot shows an Excel spreadsheet with two main sections. The left section, titled 'Report List History', contains a table with columns: Date of Log, Date, Time, Port, Login, Action, Object, and Qualifier. The right section, titled 'Report Display Alarm', contains a table with columns: Active?, PRI-CDR, H323-SGR, SIP-SGRP, and WARNING. Both sections show data for the date 7-29-2020.

Report List History								Report Display Alarm							
7-29-2020 0:32 AM - Report for Voice System name: Automation_CM - list history								7-29-2020 0:31 AM - Report for Voice System name: Automation_CM - display alarms							
Date of Log	Date	Time	Port	Login	Action	Object	Qualifier	Active?	PRI-CDR	H323-SGR	SIP-SGRP	WARNING			
12/31/2017	Jul-28	07:56	MANNT	dadmin	cha	secondary-us							7		
12/31/2017	Jul-28	07:56	MANNT	dadmin	login								7		
12/31/2017	Jul-28	07:59	MANNT	dadmin	logff				1	H323-SGR		WARNING FEB	7		
12/31/2017	Jul-28	07:58	MANNT	dadmin	cha	secondary-us							7		
12/31/2017	Jul-28	07:58	MANNT	dadmin	login					8	H323-SGR	WARNING FEB	7		
12/31/2017	Jul-28	07:27	MANNT	dadmin	logff					8	H323-SGR	WARNING FEB	7		
12/31/2017	Jul-28	07:27	MANNT	dadmin	cha	secondary-us			45	SIP-SGRP		WARNING FEB	7		
12/31/2017	Jul-28	07:27	MANNT	dadmin	login				45	SIP-SGRP		WARNING FEB	7		
12/31/2017	Jul-28	07:26	MANNT	dadmin	logff					9	H323-SGR	WARNING FEB	7		
12/31/2017	Jul-28	07:26	MANNT	dadmin	cha	secondary-us				9	H323-SGR	WARNING FEB	7		
12/31/2017	Jul-28	07:26	MANNT	dadmin	login					13	H323-SGR	WARNING FEB	7		
12/31/2017	Jul-28	07:25	MANNT	dadmin	logff					13	H323-SGR	WARNING FEB	7		
12/31/2017	Jul-28	07:25	MANNT	dadmin	cha	secondary-us				14	H323-SGR	WARNING FEB	7		
12/31/2017	Jul-28	07:25	MANNT	dadmin	login					14	H323-SGR	WARNING FEB	7		
12/31/2017	Jul-28	07:11	MANNT	dadmin	logff					21	H323-SGR	WARNING FEB	7		
12/31/2017	Jul-28	07:09	MANNT	dadmin	cha	secondary-us				21	H323-SGR	WARNING FEB	7		
12/31/2017	Jul-28	07:09	MANNT	dadmin	login					23	H323-SGR	WARNING FEB	7		
12/31/2017	Jul-28	07:08	MANNT	dadmin	logff					23	H323-SGR	WARNING FEB	7		
12/31/2017	Jul-28	07:04	MANNT	dadmin	cha	secondary-us				30	H323-SGR	WARNING FEB	7		
12/31/2017	Jul-28	07:04	MANNT	dadmin	login					30	H323-SGR	WARNING FEB	7		
12/31/2017	Jul-28	07:02	MANNT	dadmin	logff					31	H323-SGR	WARNING FEB	7		
12/31/2017	Jul-28	06:13	MANNT	dadmin	cha	secondary-us				31	H323-SGR	WARNING FEB	7		
12/31/2017	Jul-28	06:13	MANNT	dadmin	login					34	H323-SGR	WARNING FEB	7		
12/31/2017	Jul-28	05:50	MANNT	dadmin	logff					34	H323-SGR	WARNING FEB	7		
12/31/2017	Jul-28	05:48	MANNT	dadmin	cha	secondary-us				36	H323-SGR	WARNING FEB	7		

## 1.2 Common Use cases

Apart from listed 4 reports, we can download other available 50+ types of CM reports from the Avaya ASA desktop based application.

**Example:** We can download reports for the display system-parameters customer-options, list station, list vdn, list agent-loginID, list cti-link, list hunt-group, list sys-link etc.

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## 2. Requirements & Prerequisites

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### 2.1 System Requirements

**For the PC/Laptop or server where the bot needs to run;**

- RAM: 8GB or higher
- PROCESSOR: 4 core – 2.6+ GHz Intel Core i5 or higher and equivalent for any other OS
- Hard Disk: Up to 32GB+ of overall free space in the AA Client installation drive
- Network: 1GbE
- OS: Windows 10
- .Net Framework: 4.6+

### 2.2 Prerequisites

**Software's needed;**

- Avaya site administrator (ASA) 6.0.x SP14
- Avaya CM 6.0.x (Support only Linux OS Redhat 6.8+)
- Avaya provided Linux OS 6.8+
- AA Enterprise Client 11.3.x

**Accounts/License needed;**

- Avaya CM license
- Avaya CM admin user or user with admin privilege
- AA Enterprise License

### 2.3 Security Measures

There are some security best practice recommendations that you may follow with your bot;


- It is not recommended to provide CM admin access to the Windows User Account executing the Bots, better we can provide by credential vault or already get ready/configured Avaya site administrator with automatic login feature to CM so that it won't ask to enter CM admin user credential every time while executing bot.
- It is recommended to update Avaya CM admin credential in every quarter to ensure data safety.

## 2.4 Disclaimers

*Instructions: User should configure CM in Avaya Site Administrator as 'automatically login' and not as 'manual login'. To download reports one should set login/configure to CM as automatic.*





<p><b>Input Folder</b></p> <ul style="list-style-type: none"> <li>• ConfigurationFile.txt</li> <li>• AvayaCMMasterReportSheet.xlsx</li> </ul> <p><b>My Tasks</b></p> <ul style="list-style-type: none"> <li>• AvayaCMASAReport.atmx</li> </ul> <p><b>2. My MetaBots</b></p> 	<p>bot needs for execution of the use case is saved</p> <ul style="list-style-type: none"> <li>• <b>ConfigurationFile.txt</b> is where the values need to be setup for the bot to run.</li> <li>• <b>AvayaCMMasterReportSheet.xlsx</b> provides an example of the type of content that can be provided as an input to the bot.</li> </ul> <p><b>My Tasks</b> folder contains all the Developed Platform Source Code</p> <p>2. <b>My MetaBots</b> folder contains the Developed Metabots needed for the bot execution.</p>
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### 3.3 Quick Start

#### 3.3.1 Setup

Step-1: Download Avaya site administrator software from avaya website

Download URL: [https://support.avaya.com/downloads/download-details.action?contentId=C201851016296940\\_9&productId=P0433&releaseId=6.0.x](https://support.avaya.com/downloads/download-details.action?contentId=C201851016296940_9&productId=P0433&releaseId=6.0.x)

Step-2: Download Avaya CM software from avaya website

Download URL: [https://support.avaya.com/downloads/download-details.action?contentId=C2018791143363860\\_2&productId=P0001](https://support.avaya.com/downloads/download-details.action?contentId=C2018791143363860_2&productId=P0001)

Step-3 After download above 2 Avaya related software you can setup/install in your server with the help of lab admin or document provided by Avaya. You can visit <https://support.avaya.com/> and search for CM and ASA related docs.

#### 3.3.2 Configuration

For the CM profile configuration, we have two options either manually we can create or use credential variable to access CM server in ASA software.

Note:- We should have admin user credential for the CM access and automatic login configuration to download CM reports.

- **For the manual CM profile creation please follow below provided steps**

After open ASA desktop based software click on File-> New-> Voice system-> Put voice system name as Automation\_CM-> click Next-> Next-> Put ip address of CM server-> Next-> Next-> Next-> select radio button of I want site administrator to log me in automatically->.Next-> Enter admin login username, password and pin-> Next-> Next-> Finish

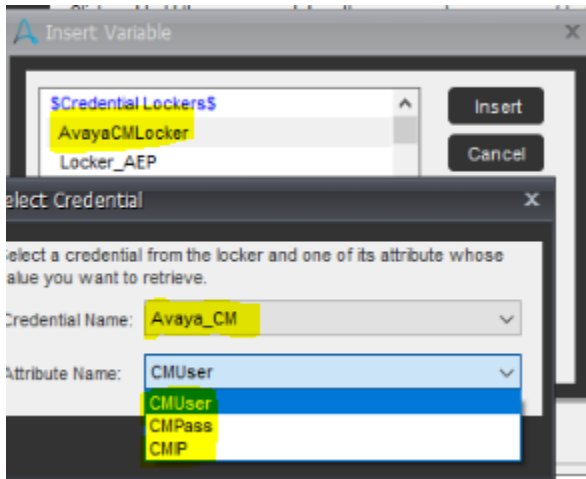
- **For the automatic CM profile creation**

Please create credential vault in control room and add into locker and provide consumer role to developer or runner user to use avaya CM admin credentials. Please find below credential, attributes and locker name details which has to be same as given details;

**Locker Name=** AvayaCMLocker

**Credential Name=** Avaya\_CM

**Credential attributes name=**CMUser, CMPass, CMIP



○ **For External File –**

<b>CREDENTIAL VARIABLES: Credential Variables to be mentioned in this Table</b>				
<b>Variable Name</b>	<b>Type</b>	<b>Mandatory</b>	<b>Purpose</b>	<b>Example Input</b>
AvayaCMLocker	Text	Yes	User has to provide same locker name as mentioned into Control room	NA
Avaya_CM	Ttext	Yes	User has to provide same credential name as mentioned into Control room	NA

<i>CMUser</i>	<i>Text</i>	<i>Yes</i>	<i>User has to provide same credential attribute name as mentioned into Control room</i>	<i>NA</i>
<i>CMPass</i>	<i>Number and Text</i>	<i>Yes</i>	<i>User has to provide same credential attribute name as mentioned into Control room</i>	<i>NA</i>
<i>CMIP</i>	<i>Number</i>	<i>Yes</i>	<i>User has to provide same credential attribute name as mentioned into Control room</i>	<i>NA</i>

<b>INPUT VARIABLES: Input Variables to be mentioned in this Table</b>				
<b>Variable Name</b>	<b>Type</b>	<b>Mandatory</b>	<b>Purpose</b>	<b>Example Input</b>
<i>vAccessCode</i>	<i>Text</i>	<i>Yes</i>	<i>User has to provide to run bot</i>	<i>An example of the Input access code= 10126eab68e1ec30ff044d30cf34b.....</i>
<i>vAvayaCMASA</i>	<i>Text</i>	<i>Yes</i>	<i>use to store Avaya ASA software path</i>	<i>Example path=C:\Program Files (x86)\Avaya\Site Administration\bin\ASA.exe</i>

<i>vAvayaCMReportMasterReportSheet</i>	<i>Text</i>	<i>Yes</i>	<i>use to store master excel sheet name</i>	<i>Example=AvayaCMMasterReportSheet.xlsx</i>
<i>vBotName</i>	<i>Text</i>	<i>Yes</i>	<i>used to store bot name</i>	<i>Example=AvayaCMChecklistBot</i>
<i>vCMASAName</i>	<i>Text</i>	<i>Yes</i>	<i>Predifine CM connection name</i>	<i>Example=Automation_CM</i>
<i>vConfigurationFile</i>	<i>Text</i>	<i>No</i>	<i>use to store configuration file name</i>	<i>Configuration File.txt</i>
<i>vCSV</i>	<i>Number</i>	<i>Yes</i>	<i>Predefined index value as 2</i>	<i>Example= 2</i>
<i>vdisplayalarms</i>	<i>Text</i>	<i>Yes</i>	<i>Predefined search value</i>	<i>Example= display alarms</i>
<i>vdisplayerrors</i>	<i>Text</i>	<i>Yes</i>	<i>Predefined search value</i>	<i>Example= display errors</i>

<i>vEmailID</i>	<i>Text</i>	<i>Yes</i>	<i>use to store email id for sending mail</i>	<i>Example= Botadmin@visnet.in</i>
<i>vErrorFolder</i>	<i>Text</i>	<i>Yes</i>	<i>use to store error folder path</i>	<i>Example= C:\Users\VIS\Documents\Automation Anywhere Files\Automation Anywhere\My Tasks\Bot Store\AvayaCMChecklistBot-VisGlobal\Error Folder</i>
<i>vErrorHandling</i>	<i>Text</i>	<i>Yes</i>	<i>use to store error status as true if any error occur</i>	<i>Example =true</i>
<i>vHighDelay</i>	<i>Number</i>	<i>Yes</i>	<i>use for dynamic delay in task</i>	<i>Example= 8</i>
<i>vInputFolder</i>	<i>Text</i>	<i>Yes</i>	<i>use to store input folder path</i>	<i>Example= C:\Users\VIS\Documents\Automation Anywhere Files\Automation Anywhere\My Tasks\Bot Store\AvayaCMChecklistBot-VisGlobal\Input Folder</i>
<i>vlisthistory</i>	<i>List</i>	<i>Yes</i>	<i>Predefined list of values stored and use during loop</i>	<i>Example= my-list1, my-list2, my-list3, my-list4</i>
<i>vLogFolder</i>	<i>Text</i>	<i>Yes</i>	<i>use to store log folder path</i>	<i>Example= C:\Users\VIS\Documents\Automation Anywhere Files\Automation Anywhere\My Tasks\Bot Store\AvayaCMChecklistBot-VisGlobal\Error Folder\Logs</i>

<i>vLowDelay</i>	<i>Number</i>	<i>Yes</i>	<i>use for dynamic delay in task bot</i>	<i>Example = 2</i>
<i>vMidDelay</i>	<i>Number</i>	<i>Yes</i>	<i>use for dynamic delay in task bot</i>	<i>Example= 4</i>
<i>vMsguse</i>	<i>Text</i>	<i>Yes</i>	<i>Use for dynamic message box</i>	<i>Example= True or False</i>
<i>vOutputFolder</i>	<i>Text</i>	<i>Yes</i>	<i>use to store output folder path</i>	<i>Example= C:\Users\VIS\Documents\Automation Anywhere Files\Automation Anywhere\My Tasks\Bot Store\AvayaCMChecklistBot-VisGlobal\Output Folder</i>
<i>vProjectFolder</i>	<i>Text</i>	<i>Yes</i>	<i>use to store project folder path</i>	<i>Example= C:\Users\VIS\Documents\Automation Anywhere Files\Automation Anywhere\My Tasks\Bot Store\AvayaCMChecklistBot-VisGlobal</i>
<i>vProjectName</i>	<i>Text</i>	<i>Yes</i>	<i>use to store project name</i>	<i>Example= AvayaCMChecklistBot-VisGlobal</i>
<i>vReportDisplayAlarms</i>	<i>Text</i>	<i>Yes</i>	<i>use to store report list alarm csv file name</i>	<i>Example= report_display_alarms.csv</i>

<i>vReportDisplayErrors</i>	<i>Text</i>	<i>Yes</i>	<i>use to store report display error csv file name</i>	<i>Example=report_display_errors.csv</i>
<i>vReportListHistoryi</i>	<i>Text</i>	<i>Yes</i>	<i>use to store report list history csv file name</i>	<i>Example= report_list_history.csv</i>
<i>vReportPath</i>	<i>Text</i>	<i>Yes</i>	<i>use to store download report csv path</i>	<i>Example= C:\Users\VIS\AppData\Roaming\Avaya\Site Administration\user</i>
<i>vReportStatusSocketusage</i>	<i>Text</i>	<i>Yes</i>	<i>use to store report status socket usage csv file name</i>	<i>Example=report_display_errors.csv</i>
<i>vRootFolder</i>	<i>Text</i>	<i>Yes</i>	<i>use to store configuration file path</i>	<i>Example= C:\Users\VIS\Documents\Automation Anywhere Files\Automation Anywhere\My Tasks\Bot Store\AvayaCMChecklistBot-VisGlobal\Input Folder\Configuration File.txt</i>
<i>vSheetName</i>	<i>Text</i>	<i>Yes</i>	<i>use to store excel file sheet name</i>	<i>Example= Avaya CM Reports</i>
<i>vSnapshotFolder</i>	<i>Text</i>	<i>Yes</i>	<i>use to store snapshot folder path</i>	<i>Example= C:\Users\VIS\Documents\Automation Anywhere Files\Automation Anywhere\My Tasks\Bot Store\AvayaCMChecklistBot-VisGlobal&gt;Error Folder\Snapshots</i>



<i>vVendorName</i>	<i>Text</i>	<i>Yes</i>	<i>use to store vendor name</i>	<i>Example= VisGlobal</i>
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<b><i>OUTPUT VARIABLES: Output Variables to be mentioned in this Table.</i></b>				
<b><i>Variable Name</i></b>	<b><i>Type</i></b>	<b><i>Mandatory</i></b>	<b><i>Purpose</i></b>	<b><i>Example Output</i></b>
<i>vValidationOutput</i>	<i>Text</i>	<i>Yes</i>	<i>use to check whether license is still valid or not while running paid bot</i>	<i>True/False</i>

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## 4. Reports

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*There are no Bot Insight Reports generated for this Bot*

## 5. Logs

In case of Errors, Error Logs & Screenshots are generated within Error Folder (Highlighted below in yellow)

- My Tasks

- Bot Store
- Bot Name
  - Error Folder
    - Logs (Folder)

- Error

Logs Month-Day-Year.txt

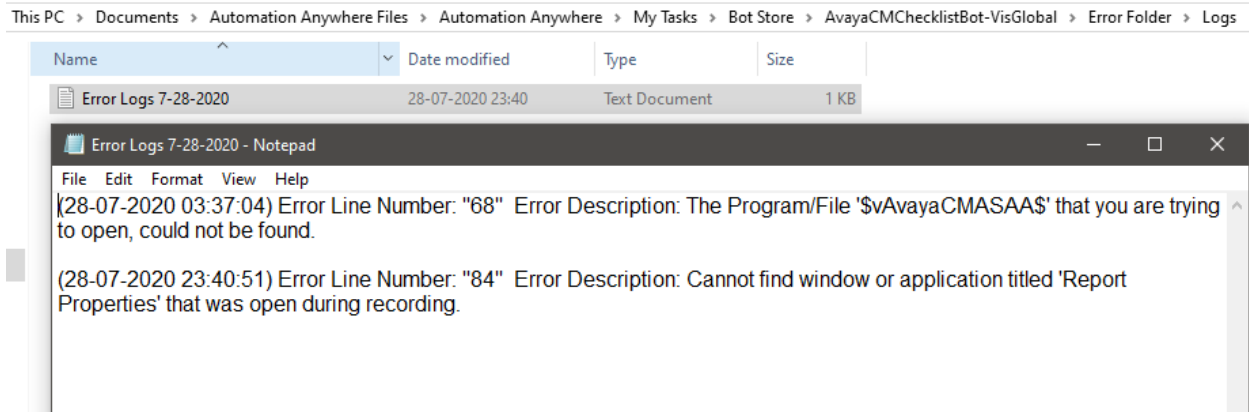
- Snapshots (Folder)

- Error Snap Month-Day-Year HourMinSec.png

**Error Logs will contain the below information;**

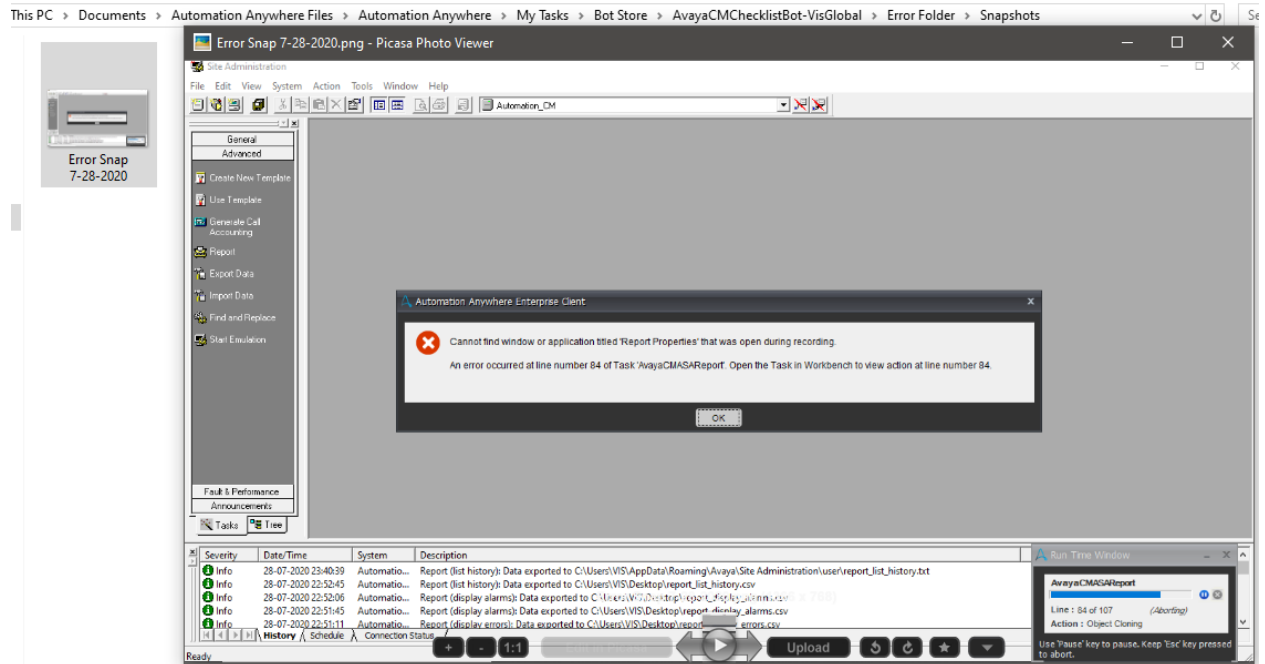
- Error Line Number
- Error Description
- Generated Timestamp

### Example of Log File:



**Note:** There are no Custom Logs generated for this Bot.

## Example of Screenshot Generated Error File:



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## 6. Troubleshooting & Support

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### 6.1 Support

User can reach out to provided support email ID for the further setup, help desk and production support

*Note:- Free bots and trial bots are currently not supported directly.*

### 6.2 FAQs

Please get connect to our email for further or any type of supports.

#### **Support Contact**

[vikul.furia@visglobal.com.au](mailto:vikul.furia@visglobal.com.au)

[ravindra.muduli@visnet.in](mailto:ravindra.muduli@visnet.in)

#### **Sales Contact**

[saurabh.burman@visglobal.com.au](mailto:saurabh.burman@visglobal.com.au)

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## Appendix A: Record of Changes

No.	Version Number	Date of Change	Author	Notes
1	1.0	30/07/2020	Ravindra Kumar	Version 1 Release

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## Appendix B: Acronyms

No.	Acronym	Description
1	AA	<i>Automation Anywhere</i>
2	CR	<i>Control room</i>
3	PC	<i>Personal Computer</i>
4	RAM	<i>Random Access Memory</i>
5	OS	<i>Operating System</i>
6	CSV	<i>Comma Separated File</i>
7	<i>Avaya CM</i>	<i>Avaya communication manager</i>
8	ASA	<i>Avaya Site administrator</i>
9	CR	<i>Credential Vault</i>
10	GB	<i>Gigabytes</i>

## Appendix C: References

No.	Topic	Reference Link
1	<i>System Requirements – Client hardware</i>	<a href="https://docs.automationanywhere.com/bundle/enterprise-v11.3/page/enterprise/topics/aae-architecture-implementation/deployment-planning/requirements-server-hardware.html#Zj0vY2F0ZWdvcnkvZXhwbG9yZT9wPUV4cGxvcmU=">https://docs.automationanywhere.com/bundle/enterprise-v11.3/page/enterprise/topics/aae-architecture-implementation/deployment-planning/requirements-server-hardware.html#Zj0vY2F0ZWdvcnkvZXhwbG9yZT9wPUV4cGxvcmU=</a>
2	<i>System Requirements – Client OS</i>	<a href="https://docs.automationanywhere.com/bundle/enterprise-v11.3/page/enterprise/topics/aae-architecture-implementation/deployment-planning/requirements-operating-system-compatibility.html#Zj0vY2F0ZWdvcnkvZXhwbG9yZT9wPUV4cGxvcmU=">https://docs.automationanywhere.com/bundle/enterprise-v11.3/page/enterprise/topics/aae-architecture-implementation/deployment-planning/requirements-operating-system-compatibility.html#Zj0vY2F0ZWdvcnkvZXhwbG9yZT9wPUV4cGxvcmU=</a>
3	<i>A people Community Site</i>	<a href="https://apeople.automationanywhere.com/s/?language=en_US">https://apeople.automationanywhere.com/s/?language=en_US</a>
4	<i>Product Documentation portal</i>	<a href="https://docs.automationanywhere.com/">https://docs.automationanywhere.com/</a>