

Schneider Electric Altivar Process ATV9xx DTM Library V4.6.2

- Release Notes -

This document contains important information about the Altivar Process ATV9xx DTM Library software component and Release Content.

1. Package Content

Software Component Name	Version
Altivar Process ATV9xx DTM Library	V4.6.2
Altivar Process ATV9xx	V4.6.2.0

2. Features

2.0 What's New in V4.6.2

2.0.1 Evolutions

>> **396757**: Support of ATV9xx V4.6IE42 firmware.

>> **332220**: A System Use Notification window will now appear before the user authentication screen.

>> The default value of the BSP parameter has been changed to "Standard at 0%" in the firmware V4.6, which may affect Load from Device and Store to Device operations; refer to DTM V4.6.2 limitations for details.

2.0.2 Bug Fixes

>> **332122**: Run command can be executed over Ethernet even when the product is not configured for Ethernet control.

>> **387287**: Customer information is not being validated during APM registration.

>> **396995**: With a standard APM using 6 power modules, the serial number of the 6th power module is not displayed.

>> **393386**: NMP Parameter Display Value Incorrect in SoMove Compared to HMI.

2.1 What's New in V4.5.2

2.1.1 Evolutions

>> **372383**: Support of ATV9xx V4.5IE41 firmware.

>> **371111**: Support of dPAC module VW3A3530D (The Protocol & Drive Profiles sub-node is in disabled mode. Please use EcoStruxure Automation Expert to configure it.)

>> **373630**: Time Delay Control (TDC) parameters added in the Parameters List.

>> **342762**: APM - Update of the License file with new serial number when Power Module or AFE brick or BUO Power Module is being replaced.

>> **365160**: The Extended Error History includes the option to download the file directly from the drive in CSV format.

>> **345080**: Update of APM Drive registration.

>> **307405**: Cybersecurity Improvements.

2.1.2 Bug Fixes

>> **361231**: Time Delay Control (TDC) menu not always visible in the Parameters List

>> **361232**: Time Delay Control (TDC) menu not visible after save - open operations

>> **376640**: In the Parameters Layout > PID section, the PER parameter is mistakenly listed in the table instead of RIG (PID controller integral gain)

>> **357294**: AP25, DBGF and CMI parameters are missing in My Dashboard

>> **370379**: ATV9xx DTM - APM - Power Board Mismatch.

>> **374651**: dPAC - Configuration transfer failed

2.2 What's New in V4.3.0

2.2.1 Evolutions

>> **358309**: Support of ATV9xx V4.3IE40 firmware.

>> **352771**: Support of PROFIsafe Module VW3A3807 (FW V1.1IE04_B09) from ATV9xx V4.3IE40 firmware onwards.

>> **322729**: Safety Conf and Safety Display tabs for PROFIsafe Module.

>> Support of Hardwired Safety & CIP Safety Module in V2.1 and from V4.3 firmware onwards.

2.2.2 Bug Fixes

>> **154472**: ATV9xx - Handling CFI2 error, while doing download with Multi configuration.

2.3 What's New in V4.2.1

2.3.1 Evolutions

>> **350654**: Support of ATV9xx V4.2IE39 firmware.

>> **308964**: Cybersecurity enhancements

2.3.2 Bug Fixes

>> **290588**: ATV9xx - AFE temperature value not shown

>> **347563**: ATV9xx - APML device registration status showing wrong in DTM home page

2.4 Features in V4.1.1

2.4.1 Evolutions

>> **336086**: Support of ATV9xx V4.1IE38 firmware.

>> **335538**: Support for additional references in Multidrive Family

>> **310326**: Cybersecurity enhancements

2.4.2 Bug Fixes

>> **309575**: ATV9xx - Not possible to connect to SoMove

>> **324322**: ATV9xx - Conversion ATV71 -> ATV930 failing

>> **288150**: ATV9xx - Additon of PSDx parameters in fast scope tab

2.5 Features in V3.9.4

2.5.1 Bug Fixes

>> **305817**: ATV9xx - Cyber security on PROFINET cannot be disabled with the DTM.

>> **231389**: Change topology doesn't work in Multi-Motor mode.

>> **260288**: ATV9xx DTM generates "Kernel Error while initializing..." on opening at Control Expert.

>> **308567**: ATV9xx DTM - TABs crashed after Modify Topology -> Name change.

>> **198980,309680**: ATV900 - CFF with Multi-Motors .

>> **325552**: Scope Configuration Error.

>> **325545**: SoMove - impossible to install the latest FR lang.packs for ATV9xx DTM.

>> **222462**: ATV9xx DTM cannot export customer's .PSX, to excel/TXT/PDF.

- >> **223948**: ATV9xx DTM: Encoder type should be compatible with device type.
- >> **308524**: ATV930 ETA and ETI are not always updated in fault history.
- >> **301395**: ATV9xx DTM - No information about EN51 parameter on the catch on the fly layout.
- >> **257657**: Wrong result in Power Supplies test (Services only).

2.6 Features in V3.9.3

2.6.1 Evolutions

- >> **225822**: Support of Profinet V2 module VW3A3647.
- >> **267071**: Support secured handshake between the DTM and the VSD through Profinet V2 module.
- >> **279820**: Integration of VW3A3647 module UI under fieldbus node.
- >> **307200**: Support of ATV9xx V3.9IE36 firmware.
- >> **311999**: Latest help manual integration on the DTM.

2.7 Features in V3.8.7

2.7.1 Evolutions

- >> Support of Altivar Process ATV9xx DTM Library by Windows 11

2.7.2 Bug Fixes

- >> **282654**: ATV9xx DTM does not show correct MAC@ and Ethernet frames.
- >> **250137**: ATV9xx – Profinet – wrong Security presentation .
- >> **244229**:ATV9xx DTM - Imported scope trace different than original.
- >> **293909**: Not possible to set braking resistor monitoring parameters.
- >> **260809**:ATV930 DTM CFF with Multiconf/MultiMotor .
- >> **301279**: ATV9xx - Device Type Recovery - Display issue .
- >> **299376**: ATV9xx HMI Personalization - Issue with QR code creation.
- >> **231120**: ATV9xx: 'Load from device' cause EcoStruxure Control Expert freezing.
- >> **206927**:ATV9xx & Profinet/ Sometimes Run button is unexpectedly disabled in Control Panel .
- >> **180812**:ATV9xx & EtherNetIP: TTOB not accessible by SoMove.

>> **274737**: Cannot transfer ATV9xx project v.3.3 to drive ver.3.4 (and higher).

Resolution:

1. Upgrade to FW 3.6 or
2. Open the project, modify to V3.4 version using modify topology option and perform download.

2.8 Features in V3.8.5

2.8.1 Evolutions

>> **279455**: Support of VW3A3530D Distributed Programmable Automation Controller (dPAC) module.

>> **280207**: Support of a new custom I/O profile named “Ecostruxure Automation Expert dPAC”, available in both ModbusTCP & EthernetIP protocols.

2.8.2 Bug Fixes

>> **285067**: Download to drive fails when having restricted permission to folder.

2.9 Features in V3.8.4

2.9.1 Evolutions

>> **280302**: Support of CIP (Common Industrial Protocol) Safety with V2.1IE82_B17 firmware and VW3A3809 CIP Safety Module.

>> **261628**: Implementation of CIP Safety display tab.

2.10 Features in V3.8.2

2.10.1 Bug Fixes

>> **276239**: Changing IO scanner content in online mode affects command & reference parameters.

>> **221362**: PTO parameter value displayed in the DTM does not reflect the value in the device.

2.11 Features in V3.8.1

>> **269171**: Support of a new firmware V3.8IE34_B02.

>> **268737**: Addition of TPFV parameter to adjust the filtering on torque data

2.12 Features in V3.7.1

>> Support of a new firmware V3.7IE32_B01.

2.13 Features in V3.6.0

2.13.1 Evolutions

- >> **219053**: Altivar Process Modular(APM) server migration from Schneider Data Hub(SDH) to Asset LifeCycle Manager(ALM).
- >> **234005**: Support of a new firmware V3.6IE31_B10.
- >> **241913**: Support for new variant of drive reaction on 4-20 mA input loss.
- >> **241912**: Support for MxPro substitution.
- >> **235255**: Support for Altivar Process Modular additional references.
- >> **235829**: Latest help manual integration on the DTM.
- >> **257001**: DTM updated with latest definition of Safety messages.

2.13.2 Bugs Fixes

- >> **192914**: Parameters unchanged when Modify Topology done on multimotor project.
- >> **202832**: Not able to switch the configuration in multimotor configured project.
- >> **212674**: Service tab: Analog Front End(AFE) and Braking Unit(BU) data correction.
- >> **205921**: Service tab: fan speed/diagnostic data not updated in DTM.
- >> **249005**: ATV930U30M3 reference having incorrect nominal current value on My Device tab.
- >> **250812**: Modbus TCP IO scanner table is exchanged with the PLC, instead of Ethernet/IP IO scanner table.

2.14 Features in V3.5.0

2.14.1 Evolutions

- >> **214783**: Support of a new firmware V3.5IE29_B03.
- >> **216949**: Support of a new user interface to manage the Rapid Spanning Tree Protocol (RSTP) settings from the DTM and as well as the graphical display terminal.

2.14.2 Bugs Fixes

- >> **164184**: Translation issue, Long Labels which are not translated for the Spanish language.
- >> **233454**: PWVU value is wrong for a few references, must be correct for all references.
- >> **204104**: Wrong message shown for Autotune function when the drive is in NLP.

>> **232602:** CLIG is not available in configuration for ATV980 references in v3.4.

>> **170665:** DTM cannot download file to the drive and showing CFI2 Error because of the wrong PWVU value.

2.15 Features in V3.4.3

>> Support for Altivar Process Modular liquid cooled 400-480V references.

>> Bug Fixes

2.16 Features in V3.4.0

>> Support for new FW V3.4IE28_B05

>> Safety message updates

>> Bug Fixes

2.17 Features in V3.3.3

>> Bug Fixes

2.18 Features in V3.3.1

>> As part of the California CS Law compliance (IEC-62443-4-2 CR 1-1 Human user identification and authentication), the DTM comes with a new set of features meant to provide a more secured connection to the device over Modbus TCP (only applies to Ethernet and PROFINET fieldbuses)

>> In a few words:

>> User authentication will be required at every attempt to connect to the device. **Note:** this mechanism is by default enabled but the user can still disable it if required.

>> A default password is provided by the factory setting (available in the Keypad), however the user will be requested at each authentication attempt, to define a different and secured password (according to a customizable password policy). It remains possible to keep the default password temporarily, but the same reminder will pop up over again during next connection attempts

>> The User authentication can be enabled/disabled and the Password policy can be modified from the Security node (Parameters List tab) of the considered fieldbus

Note: For legacy option card (Modbus TCP/PROFINET), User authentication and Password Policy configuration will be deactivated since they are not supported by these version of cards.

>> Support for new firmware versions

>> V3.2IE25_B03 -> Support new Altivar Process Modular LC Family 690V references

>> V3.3IE26_B08 -> Support the User authentication for California Law compliance purposes

- >> Bug Fixes

- >> Updated help and programming manuals

2.19 Features in V3.1.1

- >> Import Project configuration from Excel functionality (Specific Format support of GEA Customer)

- >> Bug Fixes

2.20 Features in V3.1.0

- >> Support for ATV9xx firmware version V3.1IE24_B17

- >> Bug Fixes

2.21 Features in V2.3.5

- >> IFW API migration to the new Apigee enterprise service

2.22 Features in V2.3.2

- >> Support for Functional Safety in Direct Safety Logic Mode with additional tabs in the DTM : Safety Display and Safety Conf

- >> Support for Safety related ATV9xx firmware version V2.1IE80_B06 and Safety module firmware version A05IE10_B14

- >> Bug Fixes

2.23 Features in V2.3.0

- > Support for Altivar Process Modular 400V References

- > Support for ATV9xx firmware version V2.3IE20_B04

- > Bug Fixes

2.24 Features in V2.2.1

- > Support for New FW V2.2IE_B03

- > Support for FW compatibility

- > Multi Configuration/ Multi Motor support

- > Bug Fixes

2.25 Features in V2.1.3

- > Fix for FMK Version incompatibility
- > Bug Fixes

2.26 Features in V2.1.2

- > Support for ATV9xx firmware version V2.1IE17_B11
- > CR Fixes

3. IMPORTANT NOTICE

- > Before you install Altivar Process ATV9xx DTM Library:
 1. Check if Altivar Process ATV6xx DTM Library V1.1.24 is installed in your PC.
 2. If it is installed, upgrade it to the latest available Altivar Process ATV6xx DTM Library version.

4. Some restrictions which we are working on

- > DTM is not in synchronized state after doing factory reset, a "Refresh" or "Load from Device" is requested.
- > Sometimes parameter values cannot be edited in parameter grid inside parameter list tab .Use F2 key to edit parameter values.
- > Only English is available in the first version of this software.
- > Local Stop Message will not be displayed,if Local Stop button is pressed momentarily or quickly.The button has to be pressed firmly for 4-5 Sec.
- > Visibility or disabling of a parameter depending on other parameter(s) are not managed at the moment in the parameter grid.
- > We observed that for some drive references, the CLI (Current Limitation) parameter does not reset after a factory setting.
- > Software does not respond after you try to select all parameters in the parameter tab using Ctrl + A.
- > Import of configuration stored in the Keypad HMI from SoMove homepage is not yet available.
- > MultiMotor switching sketchview is not yet available.
- > Modify Topology does not update parameter value ranges (min & max) of NPR,NCR and UNS for some references.
- > FDT M&M: Unexpected Danger message is displayed after the warning message when AEMC parameter is modified.
- > DTM disconnects after store to device and connect is done from a new project for the first time.
- > RSTP evolution , If the user is connected with the device and changes the ST0C from the Keypad, we will get the updated states for ST0V, ST0S. But the ST0A and ST0C will not show the updated value unless the user has restarted the device. Also the synchronized state will still show no change in the device dataset as the signature/ counters are not updated.

> RSTP Configuration (ST0C) will not be updated when factory settings is applied.

Limitations for DTM version V4.6.2

When there is a firmware mismatch

	Load from device	Store to device
Device ver. > DTM ver.	YES/NO, ①③	YES, ④
Device ver. < DTM ver.	YES, ②	YES/NO, ⑤

① When device firmware version is higher than the DTM (firmware version) project and trying to do load from device, following message is shown.

"You are trying to load from a device a newer version of the configuration file. Parameters that are not supported will not be loaded from the device."

② When DTM is of higher firmware version than device and any parameter, that leads to firmware incompatibility, is modified in the DTM and loading from device, the following message is shown.

"The configuration file activates some behaviour that are not known by the device. The related parameters will be reset to factory setting."

For ex: DTM (firmware version)project is 3.6 and Device firmware version is 3.5 and when TQNC(new parameter) in the DTM is modified, load from device operation will reset TQNC to its default value in the DTM.

③ . When the device firmware version is higher than the DTM version, a Load from Device operation may fail due to firmware incompatibility in the following cases:

1. A new list value (unknown to the older DTM) is assigned to an existing parameter on the device.

Example: If the device firmware is V4.6 and the DTM project version is <= V4.5, the load operation is blocked because the new default value of the BSP parameter is not recognized by the DTM.

Solution: Assign BSP parameter value to **"Standard ref template"** in the device before performing the load operation.

2. A new parameter (not supported by the older DTM) has been modified on the device.

Example: If the device firmware is V3.6 and the DTM project version is V3.5, modifying the new parameter TQNC will prevent the load operation since it does not exist in the DTM.

In both cases, the following message is displayed:

"This configuration of the device cannot be loaded because it activates at least one behaviour that is not available."

④ When the device firmware version is higher than the DTM version, performing a Store to Device operation may result in compatibility issues. In this case, the following message is displayed:

"You are trying to download an older version of the configuration file to a newer version device. Some parameters in the newer version device may be inconsistent with the older version configuration file. This may lead to disconnection."

1. A new list value (unknown to the older DTM) is assigned to an existing parameter on the device.

Example: If the device firmware is V4.6 and the DTM project version is \leq V4.5, the store operation is blocked because the new default value of the BSP parameter is not recognized by the DTM.

Solution: Assign BSP parameter value to **"Standard ref template"** in the device before performing the store operation.

2. A new parameter (not supported by the older DTM) has been modified on the device.

Example: If the DTM project firmware version is V3.5 and the device firmware version is V3.6, the store operation may complete successfully. However, after reconnecting to the device, modifying a new parameter such as TQNC (available only in firmware V3.6) will cause the DTM to disconnect, as the older DTM cannot interpret the newer parameter.

⑤ The following message appears during the Store to Device operation when the DTM version is higher than the device firmware version and unsupported configuration changes are detected:

"This configuration file cannot be stored to device because it activates atleast one behaviour that is not available in the device."

This occurs in the following cases:

1. A newly added parameter in the newer DTM version has been modified, but this parameter does not exist in the older device firmware.

2. A parameter defined in the newer DTM version is assigned a list value that is not recognized by the older device firmware.

Example:

1. If the DTM project version is V3.6 and the device firmware version is V3.5, modifying the new parameter TQNC in the DTM prevents the Store to Device operation. The parameter is not supported by the device firmware, which triggers the incompatibility message.

2. If the device firmware is \leq V4.5 and the DTM project version is V4.6, the store operation is blocked because the new default value of the BSP parameter is not recognized by the device.

Solution: Assign BSP parameter value to **"Standard ref template"** in the DTM before performing the store operation.

Workaround for ①, ②, ③, ④ & ⑤: Use the modify topology feature to change the topology options like reference, family, option board details in the DTM to match the details in the device and then retry the operation

When there is a topology mismatch

1. If there is a mismatch between the device and the DTM topology, following message is show

"The device topology (hardware configuration) does not match the DTM configuration, it could be due to:
>Mismatch in the device reference and power rating (refer to device nameplate)
>Mismatch in the option module inserted in the device."

Workaround: Use the modify topology feature to change the topology options like reference, family, option board details in the DTM to match the details in the device and then retry the operation.

2. CFI2 error occurs while performing store to device operation if multi configuration is enabled and active configuration is other than conf0.

3. In FDT containers other than SoMove, in case of inconsistency between DTM and device configurations following message is shown

Device Inconsistency: "Cannot continue with the current operation because the device configuration has activated atleast one behavior that is not compatible with the DTM configuration."

DTM Inconsistency: "Cannot continue with the current operation because the DTM configuration activates atleast one behavior that is not compatible with the device configuration."

When there is a mismatch observed due to introduction of security node

When store to device is performed on V2.1IE17_B11 or V2.1IE81_B01 for ATV9xx, operation is blocked and DTM cannot go online.

Workaround: California Law security has to be disabled before performing the action.

Steps to disable california law:

- 1) Open <Parameters List> tab.
- 2) Click on submenu Fieldbus > Port - Modbus TCP/EthernetIP > Security.
- 3) In the section <Security>, Switch the parameter <User Authentication> to Disable.

5. Altivar Process DTM in Control Expert

5.1 Versions Provided & Compatibility

Activity	Version
Altivar Process 9xx DTM	V4.6.2.0

Altivar Process 9xx Firmware	V1.1IE01B10 V1.2IE02B20 V1.2IE03B02 V1.3IE04B04 V1.4IE07B05 V1.6IE09B08 V1.7IE12B05 V1.8IE14_B07 V1.9IE15_B07 V2.1IE17_B11 V2.1IE81_B01 V2.1IE82_B17 V2.2IE19_B03 V2.3IE20_B04 V3.1IE24_B17 V3.2IE25_B03 V3.3IE26_B08 V3.4IE28_B05 V3.5IE29_B03 V3.6IE31_B10 V3.7IE32_B01 V3.8IE34_B02 V3.9IE36_B05 V4.1IE38_B07 V4.2IE39_B06 V4.3IE40 V4.5IE41 V4.6IE42
Hardwired Safety Module	V1.1IE02_B01
CIP Safety Module	V1.1IE03_B15
ControlExpert	ControlExpert V16.2
EcoStruxure Control Expert PSx DTM Library	V3.21.25142.02
M580 CPU RUN boot	V4.0
M580 BME CPU	V4.40
Profinet Option Card	V3.2IE12

5.2 Features

- > Additional tabs in the DTM : Safety Conf and Safety Display for supporting the Hardwired Safety.
- > Additional tabs in the DTM : CIP Safety Display for supporting the CIP Safety Module.

5.3 Known issues or Observations:

- > Pencil Icon (data set changed) that enables the Apply button appears when there is preset conf settings configuration is exported and imported back
- > Sometimes while performing load from device, resetting, open of .sft file, Safety Message pop up appears when SC08 is set to Level / Auto without entering the SC08 control
- > Labels that are too long are cropped in the Safety Display tab
- > Sometimes bad display of DTM inside Unity container when clicking the splitter bar.
- > Connection loss is happening for the first time after device recovery with 600V & 690V references.
- > Under service tab voltage ranges are not dependent on firmware selection.
- > Scope parameters are not selected in the parameter selection dialog when loaded from a saved configuration.
- > Connection over EIP (applies to EcoStruxure Control Expert only) is locked whenever User authentication is enabled.
- > Downloading a configuration with a version anterior to V3.3IE26_B08 will automatically and inevitably enable the User authentication feature.
- > In EcoStruxure Control Expert and EcoStruxure Machine Expert , the "Return", "Tab", and "Esc" keys are not processed during Login, Change Password, Security panels or any notification dialogs.
- > Download to device fails when Multi Configuration is active. To workaround this issue, the timeout has to be increased to 5000ms in the communicatoin dtms settings

6. Altivar Process DTM in Ecostruxure Machine expert

6.1 Versions Provided & Compatibility

Activity	Version
Altivar Process 9xx DTM	V4.6.2.0

Altivar Process 9xx Firmware	V1.1IE01B10 V1.2IE02B20 V1.2IE03B02 V1.3IE04B04 V1.4IE07B05 V1.6IE09B08 V1.7IE12B05 V1.8IE14_B07 V1.9IE15_B07 V2.1IE17_B11 V2.1IE81_B01 V2.1IE82_B17 V2.2IE19_B03 V2.3IE20_B04 V3.1IE24_B17 V3.2IE25_B03 V3.3IE26_B08 V3.4IE28_B05 V3.5IE29_B03 V3.6IE31_B10 V3.7IE32_B01 V3.8IE34_B02 V3.9IE36_B05 V4.1IE38_B07 V4.2IE39_B06 V4.3IE40 V4.5IE41 V4.6IE42
Hardwired Safety Module	V1.1IE02_B01
Ecostruxure Machine expert	Ecostruxure Machine expert V2.2.1

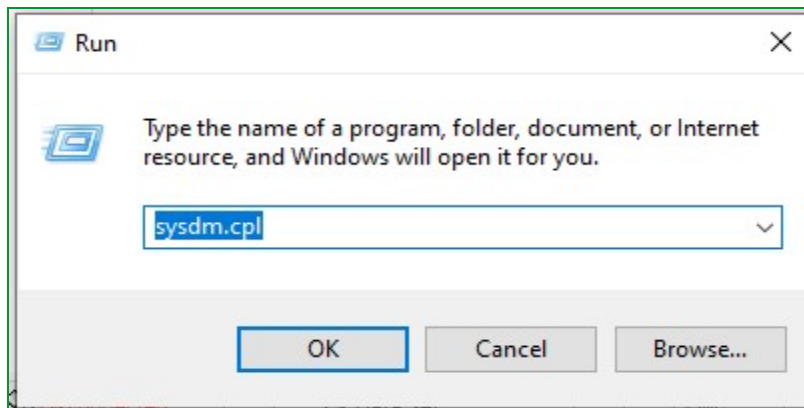
7. Troubleshooting

> Please ensure below troubleshooting steps, failing to comply with these might results in crashes, hangs or other possible commissioning-blocking issues.

7.1 Modify Temp location:

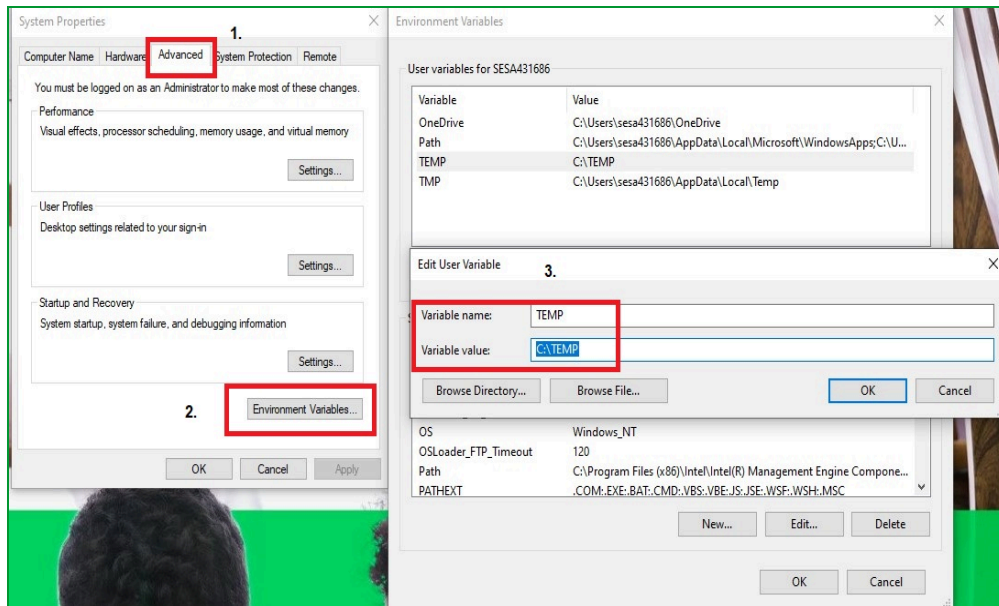
> Press 'Windows Key' and 'R Key' together, It will open "Run Window".

> Type "sysdm.cpl" in "Run Window", Click on "OK"



> Navigate to Advanced tab, Click on environment variables button.

> Edit the temp variable entry from "%USERPROFILE%\AppData\Local\Temp" to "C:\Temp".



If the issue still persists, please contact the support team.