PDP Context & Internet Setup using AT+CGDCONT

# 1. Introduction

This report presents a theoretical explanation of the use of the AT+CGDCONT command, which is essential for setting up mobile internet access via GSM or LTE modems. As the CelerSMS AT Emulator does not support this command, the execution and verification of the command have been skipped. However, this document provides a detailed overview of its syntax, purpose, and application.

# 2. Overview of AT+CGDCONT

The AT+CGDCONT command is used to define a PDP (Packet Data Protocol) context. This context tells the modem how to connect to the internet over a cellular network. The command includes parameters such as context ID, PDP type (e.g., IP or IPV6), and the APN (Access Point Name) provided by the mobile operator.

# 3. Syntax

AT+CGDCONT=<cid>,<PDP\_type>,<APN>

# 4. Parameters Explanation

- <cid>: Context ID (usually 1 or 2)  
- <PDP\_type>: Packet type (e.g., "IP", "IPV6", "IPV4V6")  
- <APN>: Access Point Name, provided by the mobile operator

# 5. Example: Jio (India)

AT+CGDCONT=1,"IP","jionet"

This command sets up context ID 1 to use the 'jionet' APN with IPv4 protocol for mobile internet access.

# 6. Follow-up Commands (Theoretical)

After setting the APN using AT+CGDCONT, the modem can activate the context and initiate a data session using additional commands such as:  
  
- AT+CGACT=1,1 : Activates the PDP context ID 1  
- ATD\*99# : Initiates a data call (used in older GSM modules)  
- AT+QIACT=1 : Activates the context on Quectel LTE modules

# 7. Conclusion

Although the CelerSMS AT Emulator does not support AT+CGDCONT or internet setup commands, understanding their function is crucial for real-world modem configurations. Theoretical knowledge of these commands enables developers and engineers to prepare scripts for configuring modems in embedded and IoT systems.