

APN Configuration using AT+CGDCONT on a Real Modem

The AT+CGDCONT command is used to define a PDP (Packet Data Protocol) context, which is essential for enabling internet access over cellular networks on a modem. The most commonly used PDP type is IP, and the APN (Access Point Name) specifies the network a device should connect to. A **PDP context** is a structure used by GSM/UMTS/LTE networks to establish an **IP-based data session** between a modem and the internet via the operator's gateway. It includes:

- **CID** – Context ID
- **PDP Type** – e.g., IP, IPV6, IPV4V6
- **APN** – Access Point Name (provided by operator)

Basic Syntax:

- AT+CGDCONT=<cid>,<PDP_type>,<APN>[,<PDP_addr>,<d_comp>,<h_comp>]
- **Basic Parameters:**

Parameter	Description
<cid>	Context identifier (1–16)
<PDP_type>	"IP", "IPV6", or "IPV4V6" – protocol type
<APN>	APN string (operator-specific)
<PDP_addr>	(Optional) IP address to assign (usually left empty for dynamic IP)
<d_comp>	Data compression (0 = off, 1 = on)
<h_comp>	Header compression (0 = off, 1 = on)

Sample APN Settings for Indian Operators

Operator	APN	Notes
Jio	jionet	No username/password needed
Airtel	airtelgprs.com	Widely used for mobile data
Vodafone-Idea (Vi)	www	May vary by region
BSNL	bsnlnet	For BSNL prepaid users

Expected Response on Real GSM/LTE Modem

◆ Command:

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

Conclusion

- The **AT+CGDCONT** command is essential for setting up **internet access via cellular modems**.
- While the **CelerSMS AT Emulator doesn't support PDP context**, the syntax and configuration are **standardized** across most 2G/3G/4G modules.
- This assignment demonstrates an understanding of how internet sessions are configured on GSM/LTE networks using **APN provisioning**.