

## Kafka CLI (Command Line Interface) Introduction

### 1. CLI Kya Hai?

Hum is section mein **Kafka CLI** tools use karke practice karenge.

- Kafka ke sath kuch **Binaries (Scripts)** aati hain jo **bin** folder mein hoti hain.
- Agar aapne piche lectures follow karke **PATH environment variable** sahi se set kiya hai, toh aap terminal mein kahan se bhi ye commands run kar sakte hain.

### 2. OS ke hisaab se Command Extensions (Important)

Aapka Operating System kaunsa hai, uske hisaab se command thoda alag dikhega. Instructor (Stephane) course mein shayad **.sh** use karein ya bina extension ke, lekin aapko apne system ke hisaab se adapt karna hoga.

Operating System / Method	Extension	Example Command
Linux / Mac (Manual)	.sh	kafka-topics.sh
Windows WSL2	.sh	kafka-topics.sh
Windows (Native/Old)	.bat	kafka-topics.bat
Homebrew (Mac) / APT	(Kuch nahi)	kafka-topics

**Note:** Aapko yaad rakhna hai ki aapke computer par kaunsa version chalta hai.

### 3. The "Bootstrap Server" Rule (Zookeeper mat use karna)

Pehle Kafka commands mein **--zookeeper** flag use hota tha. **Lekin ab ye change ho gaya hai.**

- **New Rule:** Kafka 3.0+ ke baad se humein **--bootstrap-server** use karna hai.
- **Why:** Kyunki Zookeeper remove hone wala hai.
- **Command Logic:** Hum commands Kafka Broker ko bhejte hain, Zookeeper ko nahi.

**Correct Syntax Example:** `kafka-topics.sh --bootstrap-server localhost:9092`

**Wrong Syntax (Old):** `kafka-topics.sh --zookeeper localhost:2181` (Isse avoid karein)

### 4. Troubleshooting: "Command Not Found" Error

Agar aap terminal mein **kafka-topics.sh** type karte hain aur error aata hai: "Command not found" ya "is not recognized", iska matlab aapka **PATH variable** sahi se set nahi hai.

**Solution 1 (Fix Path):** Pichle videos dekhkar PATH fix karein. **Solution 2 (Use Full Path):** Agar PATH fix nahi ho raha, toh aap file ka pura address (Full Path) type karke command run kar sakte hain.

#### Text Diagram: Full Path Execution

```
Root Directory
|
|-- Users/Stephane/kafka_2.13/
    |
    |-- bin/
        |
        |-- kafka-topics.sh  <-- (Target File)
```

Command: /Users/Stephane/kafka\_2.13/bin/kafka-topics.sh  
(Full address type karne par command chal jayega)

## Summary Checklist

- **Identify Extension:** Pata karein ki `.sh` lagana hai, `.bat` lagana hai ya kuch nahi.
- **Bootstrap Server:** Hamesha `--bootstrap-server` flag use karein.
- **Path Check:** Agar short command na chale, toh full path use karein.

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**Next Step:** Ab hum actual commands run karna shuru karenge. Would you like to start with "**Kafka Topics CLI**" (Creating and Listing Topics)?