**CKU, CSU and CFU**

In Confluent Cloud, **CFU (Confluent Function Unit)**, **CKU (Confluent Kafka Unit)**, and **CSU (Confluent Stream Unit)** are logical units that provide a measure of capacity for different services within the cloud platform. They represent different types of workload resources, but Confluent does not publish fixed hardware specifications (CPU, RAM, storage) per unit due to the elastic and managed nature of the platform. Here’s an approximation of what each unit type represents:

**1. CFU (Confluent Function Unit)**

* **Purpose**: Used to scale *Kafka Connect* connectors.
* **CPU**: Approximately 0.25-0.5 vCPU per CFU.
* **Memory (RAM)**: 512 MB - 1 GB per CFU.
* **Storage**: Minimal and ephemeral, typically for buffering and offsets, not persistent.

**2. CKU (Confluent Kafka Unit)**

* **Purpose**: Used to scale *Kafka clusters* directly in Confluent Cloud.
* **CPU**: 1-2 vCPUs per CKU.
* **Memory (RAM)**: Approximately 8-16 GB of RAM per CKU.
* **Storage (HDD/SSD)**: 1000 GB (1 TB) of attached storage per CKU, supporting Kafka log retention and persistence.

**3. CSU (Confluent Stream Unit)**

* **Purpose**: Applies to *ksqlDB* for streaming SQL processing on Kafka topics.
* **CPU**: 0.5-1 vCPU per CSU.
* **Memory (RAM)**: 2-4 GB per CSU.
* **Storage**: Limited, mainly for temporary processing needs; it typically does not involve long-term storage.

**Summary Table**

| **Unit** | **CPU (approximate)** | **RAM (approximate)** | **Storage (approximate)** |
| --- | --- | --- | --- |
| **CFU** | 0.25-0.5 vCPU | 512 MB - 1 GB | Minimal/ephemeral |
| **CKU** | 1-2 vCPUs | 8-16 GB | 1 TB |
| **CSU** | 0.5-1 vCPU | 2-4 GB | Minimal |

These allocations are approximations, and Confluent manages the actual resources elastically depending on workload needs, dynamically adjusting for factors such as data throughput, transformations, and retention policies.