

Kubernest Components Explained in One-liners 🚀  
  
➡️ Control Plane Components  
  
𝗸𝘂𝗯𝗲-𝗮𝗽𝗶𝘀𝗲𝗿𝘃𝗲𝗿: kube-apiserver: API Management - Front-end for the control plane.  
  
𝗲𝘁𝗰𝗱: Data Storage - Stores all cluster data.  
  
𝗸𝘂𝗯𝗲-𝘀𝗰𝗵𝗲𝗱𝘂𝗹𝗲𝗿: Workload Allocation - Decides where to run unscheduled Pods.  
  
𝗸𝘂𝗯𝗲-𝗰𝗼𝗻𝘁𝗿𝗼𝗹𝗹𝗲𝗿-𝗺𝗮𝗻𝗮𝗴𝗲𝗿: State Monitoring & Recovery - Ensures the actual state matches the desired state.  
  
𝗰𝗹𝗼𝘂𝗱-𝗰𝗼𝗻𝘁𝗿𝗼𝗹𝗹𝗲𝗿-𝗺𝗮𝗻𝗮𝗴𝗲𝗿: Cloud Interaction - Manages interaction between cluster and underlying cloud provider.  
  
➡️ Worker Node Components  
  
𝗸𝘂𝗯𝗲𝗹𝗲𝘁: Node Management - Ensures containers are running in a Pod.  
  
𝗸𝘂𝗯𝗲-𝗽𝗿𝗼𝘅𝘆: Network Proxy - Maintains network rules on nodes.  
  
𝗖𝗼𝗻𝘁𝗮𝗶𝗻𝗲𝗿 𝗿𝘂𝗻𝘁𝗶𝗺𝗲: Container Execution - Runs containers.  
  
➡️ Add-on Components  
  
𝗖𝗡𝗜 𝗣𝗹𝘂𝗴𝗶𝗻: (Container Network Interface): Network Management - Provides container networking.  
  
𝗖𝗼𝗿𝗲𝗗𝗡𝗦: Service Discovery - Acts as the DNS server within the cluster.  
  
𝗠𝗲𝘁𝗿𝗶𝗰𝘀 𝗦𝗲𝗿𝘃𝗲𝗿: Performance Monitoring - Collects and stores resource usage data.  
  
𝗪𝗲𝗯 𝗨𝗜: (Kubernetes Dashboard): User Interface - Provides a web-based interface for managing the cluster.  
  
For a detailed explanation of the component workflow, please refer to my free Kubernetes (k8s) course. Although it is a work in progress, it covers the architectural details extensively.