

ABSTRACT

This research discusses the design and analysis of an Elastic Cloud-Based Data processor that utilizes Kubernetes Event-Driven Autoscaler. In the context of the development of event-driven application systems that are increasingly complex and require fast data processing and dynamic scalability, the use of cloud technology and automation is key. This research focuses on developing a data processor capable of managing the variable workload of event-driven systems using Kubernetes as a container management platform and an event-driven Autoscaler. An in-depth analysis of the use of Kubernetes Event-Driven Autoscaler integrated with cloud infrastructure to process data optimally. Experimental methods are used to test the performance of the proposed system, including tests on scalability and data processing efficiency. This research provides an analysis of the behavior of HPA in autoscaling data-processors in Event-Driven systems using KEDA (Kubernetes Event-Driven Autoscaler) and compares with existing scaling methods. This research also presents the efficiency of KEDA in autoscaling the data processor. **Kata Kunci:** *Cloud, Kubernetes, Event-Driven, Scalability.*