



PromCon  
2023

# OpenTelemetry Metrics Ingestion In Prometheus

Haoyu Sun  
Red Hat



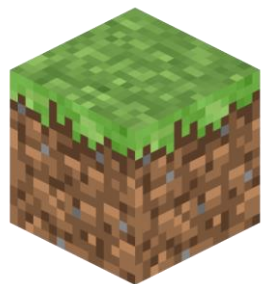
RemoteWrite with  
OpenTelemetry Collector



OTLP Native



Scrape OpenTelemetry Collector



Application



OpenTelemetry  
Collector



Prometheus



## Advantages

- Compatibility and efficiency.
- Leverage existing operational knowledge.
- Resistant to small disruptions thanks to WAL.

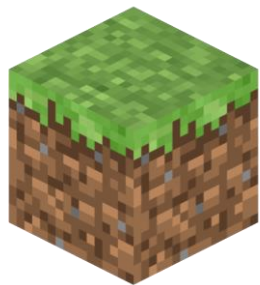
## Considerations

- Complexity of configuration and maintenance
- Requires fine tuning.
- Reliability: network disruption, Prometheus overloading

# Native OpenTelemetry Endpoint



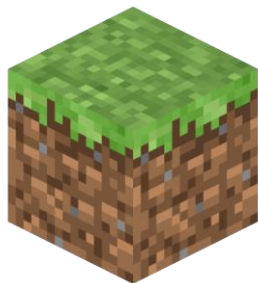
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OTLP



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OTLP



OTLP



Prometheus

OpenTelemetry  
Collector

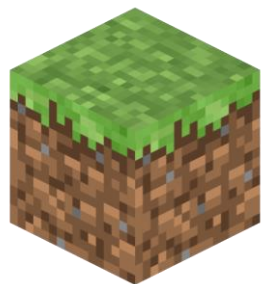


## Advantages

- No format conversion from OpenTelemetry to the Remote Write.
- Direct ingestion from applications emitting OpenTelemetry metrics.

## Considerations

- Only new version of Prometheus support OpenTelemetry endpoint.
- Potential performance & reliability impact.
- Label changes in conversion from OTLP to Prometheus



Application



OpenTelemetry  
Collector



Scrape /metrics



Prometheus



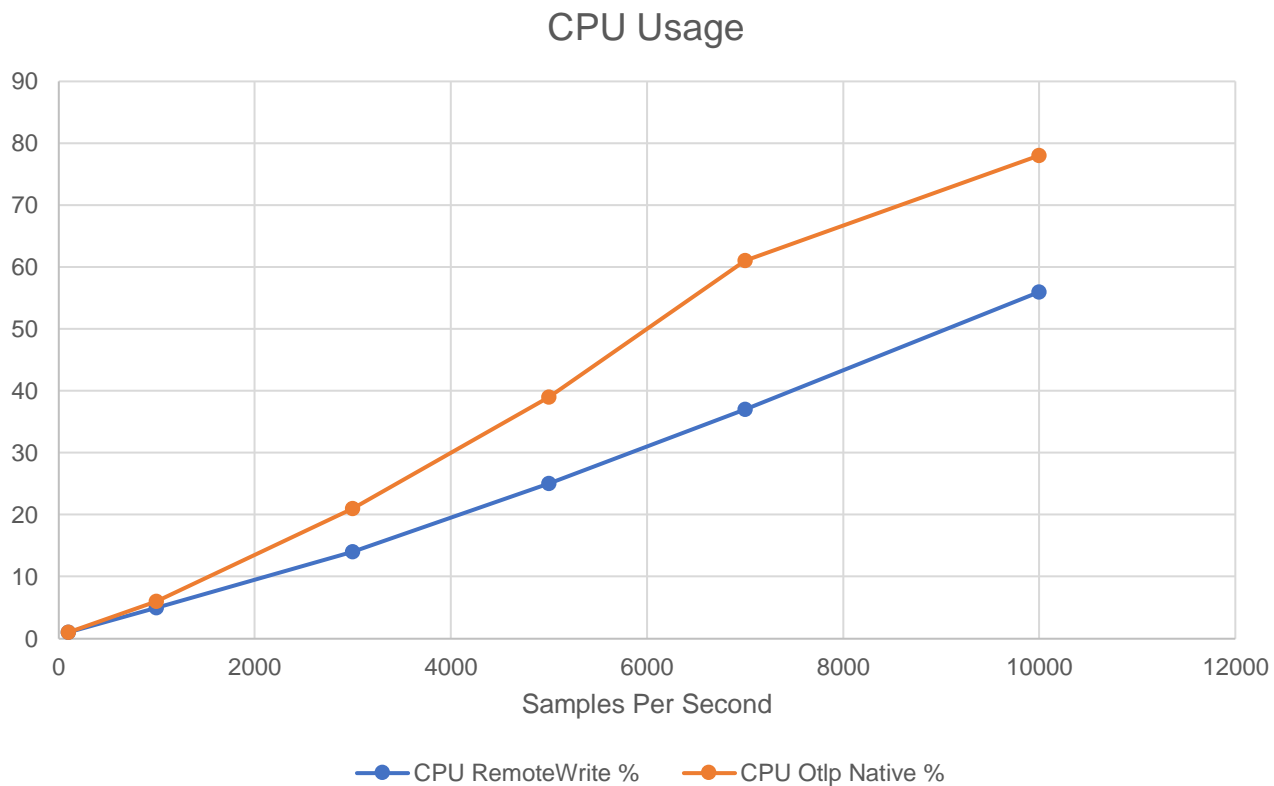
## Advantages

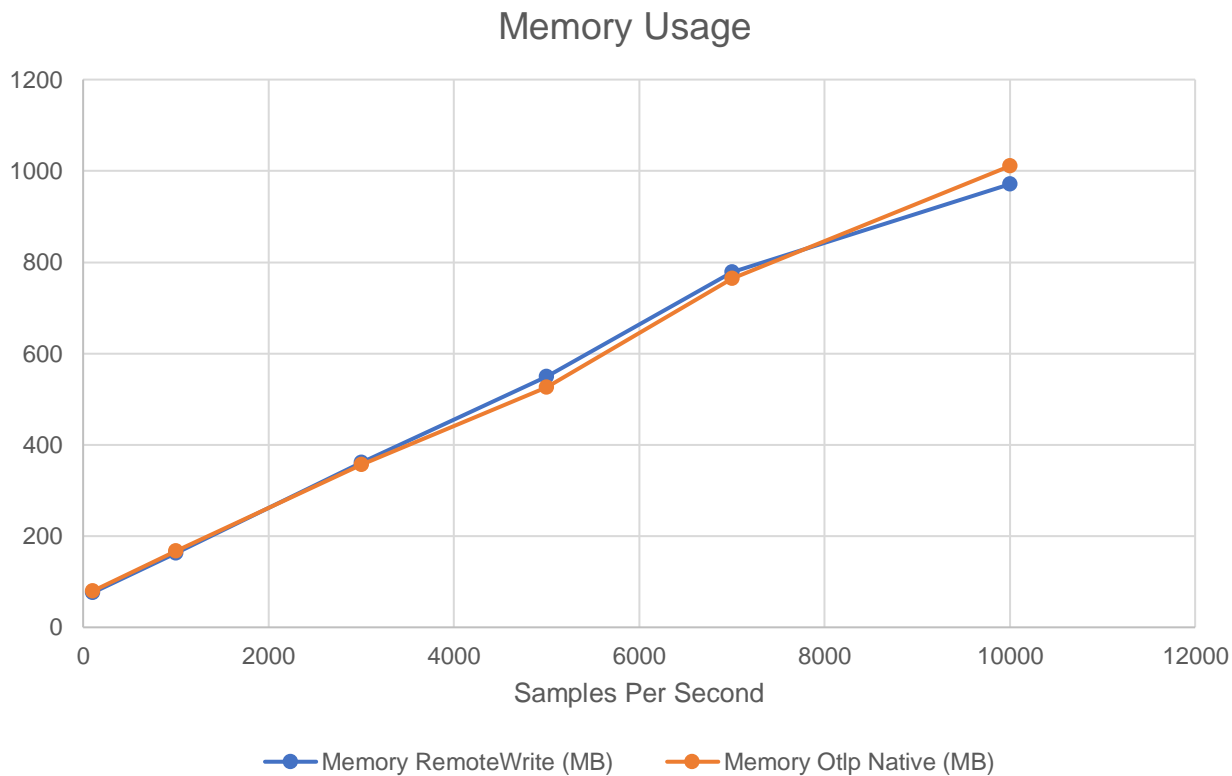
- Pull mechanism, avoid congestion.
- Smooth integration with existing Prometheus based monitoring system.
- Reliability.

## Considerations

- Potential data loss due to long scrape interval.
- Operational considerations for collector (e.g. HA)









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Slides



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