ZABBIX

Zabbix and a Federal Government Agency

A case study

ATS GROUP
ADVANCED TECHNOLOGY SERVICES

Client

INDUSTRY
TECHNOLOGY SOLUTIONS

FOUNDED
2001

STAFF
60+

LOCATION
MALVERN, PENNSYLVANIA

Our Premium Partners at the **ATS Group** work with a large federal government agency in the United States.

They primarily provide storage and compute-as-a-service for the agency, which relies on them to stay up and running at all times.

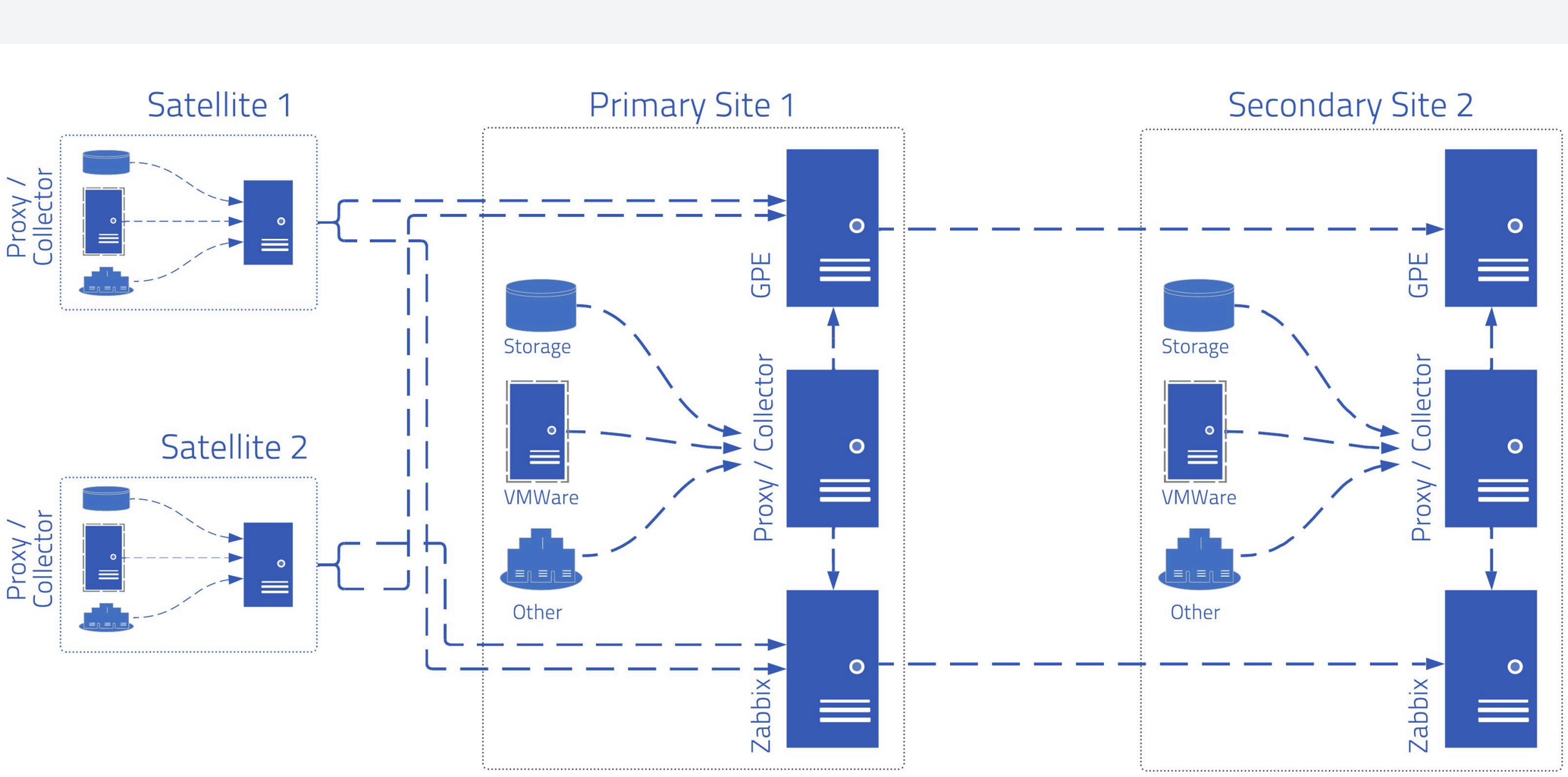
Challenge

The agency's primary goal was to **simplify their capacity and performance monitoring without extra costs**. They had very strict regulatory and SLO oversight requirements that had to be met, especially when it came to capacity and performance.

There was no commercially available software that could accomplish everything they needed, but they still required a solution that was powerful and flexible enough to monitor almost anything.

Solution

Because the agency has several different data centers of different sizes, they use a distributed proxy setup, intense SLA reporting, a ServiceNow integration, a variety of internal integrations, and a monitoring solution provided by Zabbix that includes a predictive alerting setup.

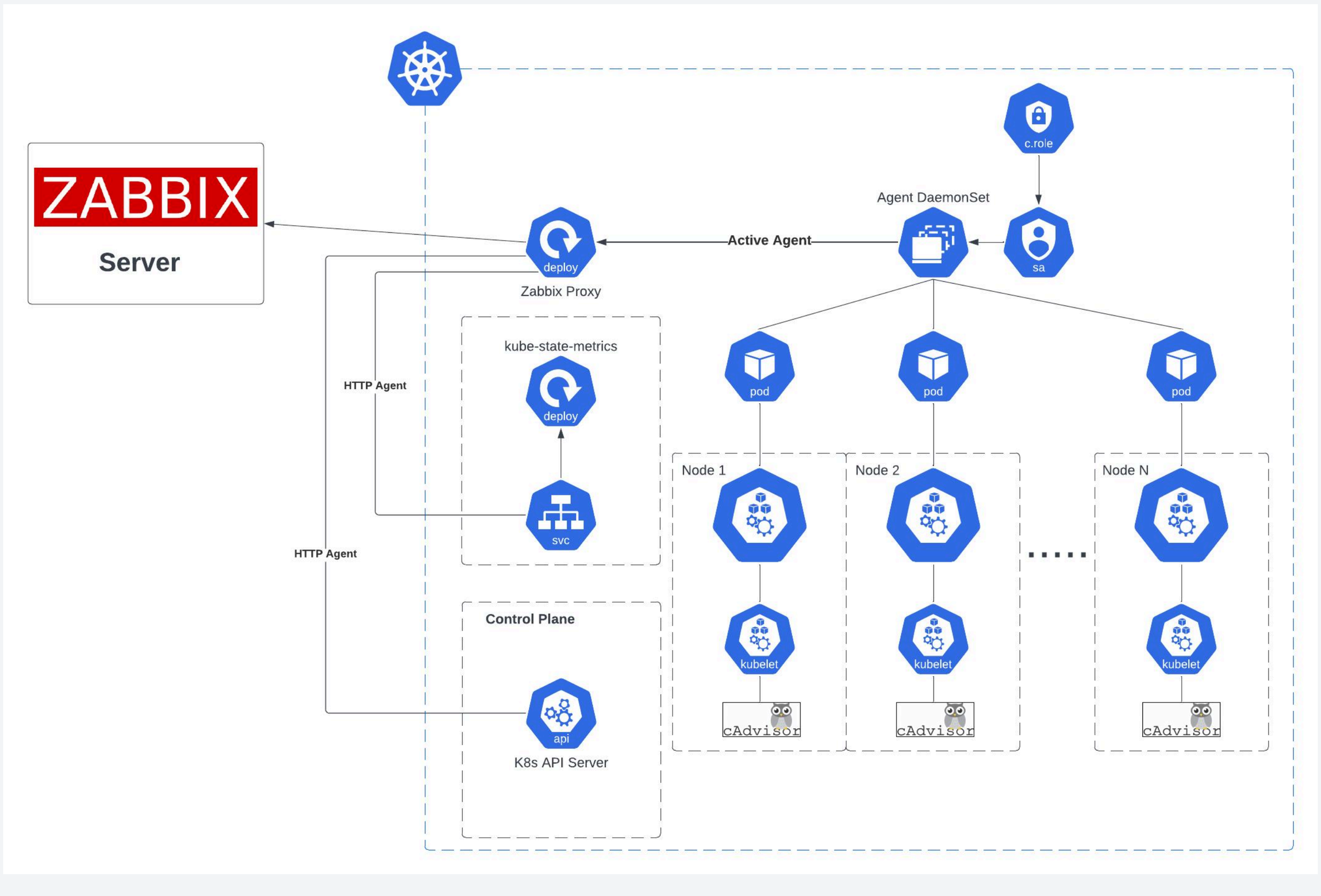


The agency has plenty of software in the mix, but it primarily relies on storage, VMWare, and Kubernetes. They also have multiple satellite offices and data centers, so that in the event of a data center failure, another can come online with minimal downtime.

On top of that, the **agency has over 30 metrics and more than a trillion data points across 10 major technologies** that they need to measure, primarily from a regulatory perspective.

Thousands of granular metrics needed to have solutions and reporting designed for them in Zabbix, including (for example) CPU cores and frequency, processor-to-core usage metrics, and virtualization ratios from hosts to virtual machines.

The agency's Kubernetes-based Openshift environment also needs to be monitored to exact specifications. Deployment took place via Helm Chart, with Zabbix components being installed as Kubernetes resources, node-level resources, and applications being monitored, while data was aggregated and sent to the Zabbix server.



Metrics are collected via the Kubernetes API and kube-state metrics, and the solution uses Prometheus-exported metrics or direct HTTP endpoint calls.

When it comes to configuration, proxies and hosts are created in Zabbix to represent Kubernetes nodes and clusters, while templates and macros are configured to point to the Kubernetes API and kube-state-metrics endpoints.

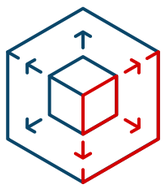
Results

Centralized Monitoring

The agency can now monitor Kubernetes clusters alongside other IT resources—all in one place.

Application Metrics without Prometheus

Tracking application-specific metrics is now possible **without needing Prometheus endpoints**.



Flexible & Scalable

The agency can customize monitoring to fit its needs and **scale effortlessly** as their environment grows.

Predictive Alerting

Anomalies can be detected early and **alerts can be sent out before issues impact services**.

Optimized Performance & SLA Compliance

The agency's teams can now stay ahead of issues to **meet SLAs, improve user experience, and boost productivity**.

In conclusion

Zabbix's flexibility and ease of customization make it ideal for customers who need a single source of truth that can be relied on in even the most stringent regulatory environments.

To learn more about what Zabbix can do

for government institutions

Visit our website