

Kittyhawk is the industry-leading security and compliance solution for unmanned aircraft (UAVs) operators, and one of Cronitor's most interesting customers. We sat down with Kittyhawk founder and CTO, Josh Ziering, to find out more about how the Kittyhawk team uses Cronitor in their most critical infrastructure.

“For our customers it all starts with maps.” says Josh. “Where you can and cannot fly changes all the time. Imagine the president is flying into town, or the military is transporting sensitive cargo. The FAA does not differentiate between your UAV and your Cessna. The laws and punishments for operating either illegally are by and large the same. Before flying you always check for flight restrictions.”

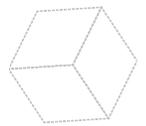
In order to provide this near real-time flight information Kittyhawk aggregates data from a large number of national and sub-national providers of no-fly zone data such as the Department of Energy and the National Parks Service. They also allow their customers to add on additional custom data layers based on their organizational and operational requirements. This patented technology called Kittyhawk Dynamic Airspace is at the core of the Kittyhawk platform.

“The number one principle in the world of aviation is safety, and the FAA (Kittyhawk powers their official B4UFLY app) as well as companies like Travelers Insurance and Royal Dutch Shell rely on us to provide them with the real-time information they need to operate safely. Ensuring our data aggregation services are working correctly is critical to our business, and we rely on Cronitor to monitor these systems and alert us when something goes wrong.”

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Each Geodata provider that Kittyhawk collects information from has different rules for both how frequently they update their data, and how frequently consumers of their data must update their own systems. Kittyhawk uses Cronitor's scheduled job monitoring and real-time alerting to enable their team to rapidly respond to any issue that arises in this mission critical data system.

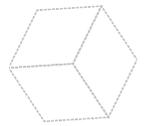


“There are dozens of reasons why one of these data feeds could stop working. It could be a problem with the feed provider, an upstream service provider, our data center, or our own platform. Priority number one is knowing when a problem occurs and Cronitor solves that better than anyone else.”

By instrumenting telemetry pings to tell Cronitor when these jobs start, complete or fail, Kittyhawk is able to track the health of each component in this system. While simple to instrument, it's also an extremely robust and reliable check that every piece of a complex distributed system is working correctly.



Cronitor also collects information on job duration and output, and is able to help identify problems before they happen. A common problem with cron is degraded job performance over time as more jobs are added to the system, or the job is not efficient enough to scale with an increase in data needs (I/O or CPU bound). In Kittyhawk's case, this type of problem could result in no longer publishing accurate flight restriction information on time, even though the jobs are still starting on the correct schedule.



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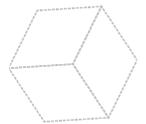
Cronitor played a key role in helping us achieve SOC 2 compliance certification

“One of the most useful features of Cronitor has been setting alerts based on duration thresholds for each of our jobs. This allows us to be alerted well in advance if a job starts to slow down, and we can take proactive steps to resolve a performance issue before it impacts our SLAs.”

Compliance is a cornerstone to achieving exceptional reliability and it should be no surprise that as the leading enterprise platform for drone operators, Kittyhawk has undergone SOC Type II compliance certification.



“Cronitor played a key role in helping us achieve SOC II certification. We were able to show the auditors exactly how we monitor our data ingestion systems, how we keep records of when these systems are run with a third-party, how we are alerted to issues via Cronitor, and how that kicks off our internal notification and remediation processes.”



Cronitor fits in nicely with the other tools Kittyhawk's engineering and operations teams are already using. “Cronitor has really been the perfect companion to our other monitoring tools. We use Sentry, Pingdom, and Netdata for our error tracking, uptime, APM and infrastructure monitoring. Those tools are all great at what they do, but none of them can solve the problem of better visibility and alerting into backend task systems like Cronitor.”

