censys

The Results Are Clear:

# Censys Finds New Services Faster Than The Nearest Competitor

## You Can't Protect What You Can't See

Security teams need to be able to quickly identify new services that come online. Spotting a suspicious server within hours, rather than weeks, can make a world of difference in incident response effectiveness. Similarly, threat hunters and researchers rely heavily on precise temporal data to augment network logs and build accurate timelines of infrastructure.

Without the ability to quickly and accurately identify new services and potential threats, security teams are essentially navigating in the dark. For these reasons and more, rapid discovery of new services is an important gauge for evaluating any internet scanner or intelligence source.

### MEASURING RAPID DISCOVERY: CENSYS VS. NEAREST COMPETITOR

Censys is committed to being the one place to understand everything on the internet. But we want to do more than just claim it–we want to prove it and that comes through rigorous research and benchmarking. The Censys Research Team set out to measure **how fast our scanning engine detects newly opened "common" ports on internet-facing hosts when compared to the competition**.

To do this, Censys deployed over 300 honeypots across various regions in Google Cloud using a staggered activation schedule for the honeypots, starting them across different days of the week and times of day, to then measure how quickly Censys and the competitor found those hosts.

The results were clear: **Censys internet scanning detects new services faster than the nearest competitor**.

# Censys Outperforms on Coverage & Time-to-Discovery

The results from this experiment reveal that Censys outperforms the competition in two key ways:

1. **Coverage:** Censys discovered **100%** of all services within a week, outperforming the competitor, which on average only detected **57%** in the same timeframe.
2. **Time to Discovery:** Censys outpaced the competitor in discovery, uncovering new services in nearly **one-sixth** of the time it took the competitor on average.

## COVERAGE: CENSYS DISCOVERS MORE NEW SERVICES THAN THE NEAREST COMPETITOR

On average, within the first 24 hours of a honeypot service going online, Censys found over 80% of common services, while the competitor found only 12%, as shown in Figure 1.

| | 21 | 23 | 80 | 443 | 2222 | 3306 |
|---|---|---|---|---|---|---|
| Censys | 80.6% | 80.3% | 88.3% | 90.2% | 80.3% | 84.4% |
| Competitor | 8.9% | 9.5% | 14.9% | 12.7% | 16.5% | 6.7% |

**Figure 1:** Percentage of honeypots discovered by each scanner within 24 hours

Beyond the initial 24 hours, the results are similar. Censys discovered every single honeypot service within a week, whereas on average, the competitor found only 57% of services. When we analyze those numbers by ports again, the competitor discovered at most 71.1% of honeypot services on port 2222 (Figure 2).

| | 21 | 23 | 80 | 443 | 2222 | 3306 |
|---|---|---|---|---|---|---|
| Censys | 100% | 100% | 100% | 100% | 100% | 100% |
| Competitor | 49% | 48.6% | 63.2% | 64.8% | 71.1% | 45.1% |

**Figure 2:** Percentage of honeypots discovered by each scanner within 1 week

## TIME-TO-DISCOVERY: CENSYS DISCOVERS SERVICES MORE QUICKLY THAN THE NEAREST COMPETITOR

Censys discovered services in a **fraction of the time** that the competitor did. On average across all ports, Censys discovered new services in about 12.3 hours, while the competitor took roughly 70 hours – **nearly six times longer**.

Censys consistently detected new services in under 24 hours on average, whereas the competitor's fastest time (port 2222) was 66.3 hours, or approximately ~2.7 days.

| | 21 | 23 | 80 | 443 | 2222 | 3306 |
|---|---|---|---|---|---|---|
| Censys | 14.5 | 14.4 | 10.3 | 9.4 | 13.2 | 13.2 |
| Competitor | 69.5 | 76.8 | 69.2 | 68.9 | 66.3 | 72.4 |

**Figure 3:** Average hours to service discovery for the intersection of services found by both scanners

A more detailed look at the distribution of individual service discovery times for each scanner further underscores this disparity. (Fig. 4).

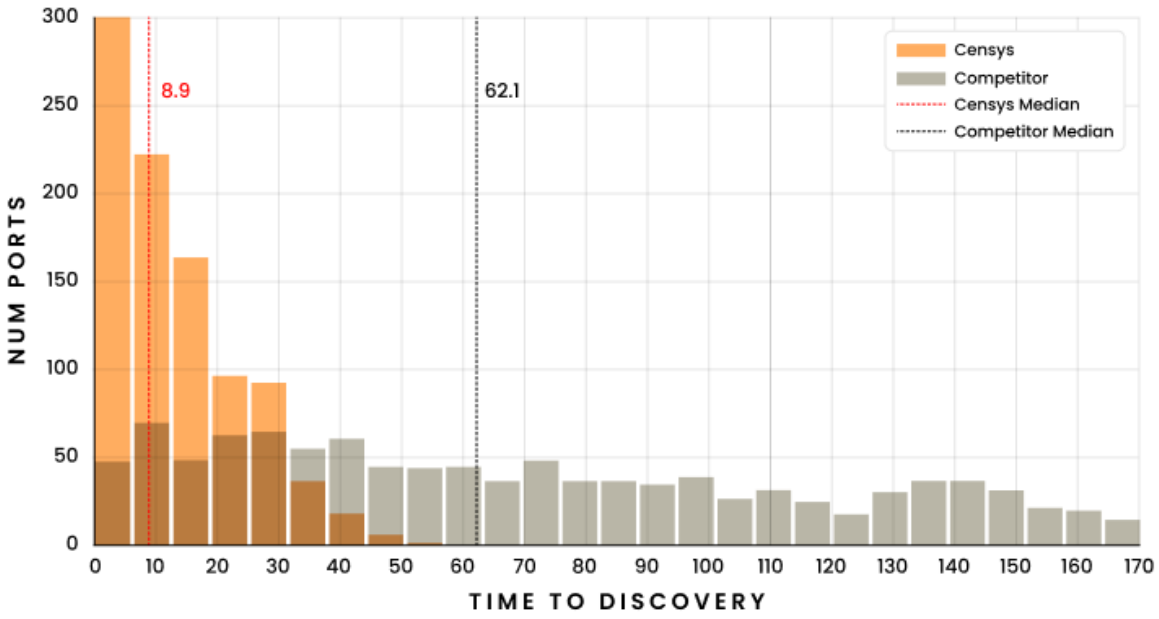


**Figure 4:** Distribution of discovery times for the intersection of services found by both scanners

Censys discovery times are clustered toward the lower end of the time spectrum, with a median of 8.9 hours, while the competitor's are scattered across a wider range and centered at 62.1 hours.

# Censys: The Superior Choice for Internet Intelligence

In a digital landscape that's constantly evolving, internet intelligence is only effective if it can quickly adapt to those changes. Security teams can't monitor or safeguard assets they aren't aware of – which makes rapid discovery not just a nice-to-have, but a necessity.

Our research demonstrates that for timely discovery of new assets, security teams can rely on Censys for unparalleled performance.

Censys discovers new services
**6 times faster than the nearest competitor**.

censys

## The one place to understand everything on the internet.

Censys is the leading Internet Intelligence Platform for Threat Hunting and Exposure Management. We provide governments, enterprises, and researchers with the most comprehensive, accurate, and up-to-date map of the internet to defend attack surfaces and hunt for threats. Censys discovers new services 140% faster than the nearest competitor.

Founded by the creators of ZMap, trusted by the U.S. Government and over 50% of the Fortune 500, Censys' mission is to be the one place to understand everything on the Internet.

censys.com