‘There isn’t really another choice:’ Signal chief explains why the encrypted messenger relies on AWS

After last week’s major Amazon Web Services (AWS) outage took Signal along with it, Elon Musk was quick to criticize the encrypted messaging app’s reliance on big tech. But Signal president Meredith Whittaker argues that the company didn’t have any other choice but to use AWS or another major cloud provider.

“The problem here is not that Signal ‘chose’ to run on AWS,” Whittaker writes in a series of posts on Bluesky. “The problem is the concentration of power in the infrastructure space that means there isn’t really another choice: the entire stack, practically speaking, is owned by 3-4 players.”

In the thread, Whittaker says the number of people who didn’t realize Signal uses AWS is “concerning,” as it indicates they aren’t aware of just how concentrated the cloud infrastructure industry is. “The question isn’t ‘why does Signal use AWS?’” Whittaker writes. “It’s to look at the infrastructural requirements of any global, real-time, mass comms platform and ask how it is that we got to a place where there’s no realistic alternative to AWS and the other hyperscalers.”

Whittaker notes that AWS, Microsoft Azure, and Google’s cloud services are the only viable options that Signal can use to provide reliable service on a global scale without spending billions of dollars to build its own. “Running a low-latency platform for instant comms capable of carrying millions of

concurrent audio/video calls requires a pre-built, planet-spanning network of compute, storage and edge presence that requires constant maintenance, significant electricity and persistent attention and monitoring," Whittaker says.

She adds that Signal only "partly" runs on AWS and uses encryption to ensure Signal and AWS can't see your conversations. Signal was far from the only company affected by the AWS outage, as it also brought down Starbucks, the Epic Games Store, Ring doorbells, Snapchat, Alexa devices, and even smart beds.

"My silver lining hope is that AWS going down can be a learning moment, in which the risks of concentrating the nervous system of our world in the hands of a few players become very clear," Whittaker writes.

https://www.theverge.com/news/807147/signal-aws-outage-meredith-whittaker