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# Understanding the Ransomware Ecosystem

When we were looking at this week's stories, it dawned on us how complex the ransomware ecosystem had become. How do we explain AT&T's payment of ransom, the proliferation of infostealers, and how they infect users in this context? After all, understanding how they interact is crucial to know where organizations can protect themselves and where their weak points lay. In this article, we will be looking at those different components and explaining what role they play in the ransomware ecosystem.

We've put together this diagram highlighting how these parts interact, here are more details. An attack begins with its initial exploitation, wherein attackers users different attack types, including brute forces of accounts, to obtain unauthorized access to systems. They are helped by bulk distributors, sharing malicious payloads on a large scale and often with the help of compromised infrastructure. Bulk distributors take advantage of the traffic distribution system, a system of scripts analyzing user queries and providing corresponding results, to redirect traffic to malicious sites. This facilitates the deployment of ransomware and sees the involvement of stealers to exfiltrate data from compromised systems and loaders to execute ransomware on targeted systems.

Once data has been stolen, access to systems is sold via initial access brokers on access marketplaces. There, affiliates use post-exploitation tools to maximize the attack impact, deploy ransomware, and manage ransom demands. Essentially, this is how ransomware-as-a-service (RaaS) operates: an offering whereby ransomware tools are leased and where sophisticated attacks are a payment away, even for actors that are less technically skilled. In their extortion attempts, they engage financial services and anonymization tools to keep their identity secret as well as bulletproof hosting services to avoid takedown attempts.

Understanding the rise of RaaS and the different components that allow this model to thrive is crucial for organizations of any sizes. This is because RaaS pools from so many different information points to be a credible threat to the security of organizations. Its nature underscores the importance of a security strategy protecting organizational data and services from various different fronts.