

## Stress Testing the Datex Security Platform

Datex has developed a security platform that anonymizes data for companies dealing with strict privacy, compliance, government, and regulatory requirements. The Mississauga-based company is ready to ramp up their business development efforts, stress testing their solution in a CENG project to gain insights on metrics like resource requirements.

### INNOVATING IN CYBERSECURITY

Every organization has confidential and sensitive data that could be severely harmful to their business, customers, and employees if it got into the wrong hands. Typical cybersecurity solutions on the market focus on stopping intruders from entering the network or have alerting systems in the event that an unauthorized user gains access. Datex takes a different approach. As opposed to setting up a barrier for entry around the network perimeter, DataStealth removes sensitive data before it enters the network, leaving intruders with nothing to steal.

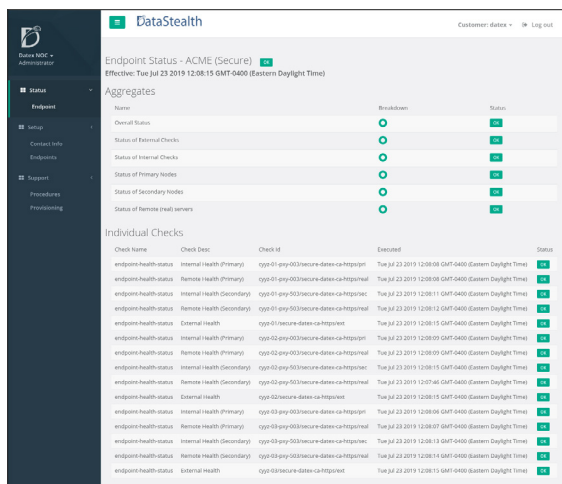


Figure 1: The DataStealth NOC Interface

### ANONYMIZING NETWORK TRAFFIC

DataStealth uses tokenization to replace confidential information, such as financial or personal data, with meaningful substitute values. Original, confidential information is then encrypted, fragmented, distributed, and stored across highly-secure databases.

When the protected 'real' data is needed, fragments will re-associate and tokens get reverted back to their original values, but only for authorized users and use-cases.

DataStealth is beneficial for customers for two main reasons:

1. It leaves nothing for intruders to steal. Hackers who breach the network are left with substitute values that have no connection to the sensitive data.
2. It enables organizations to be more compliant with their data.

In most companies, certain data, like financial information, isn't allowed to be sent to networks outside the country or even outside of the organization. DataStealth can remove data, such as payment card information and names, allowing organizations to adhere to regulatory requirements.

### IMPROVING CUSTOMER DEPLOYMENTS

A major operational barrier for Datex has been accurately forecasting resource requirements to deploy and service larger-scale customers who operate within a cloud-based infrastructure. Like many software organizations, the company has customers with different traffic levels and environments. The goal of this project was to stress-test a DataStealth deployment and better understand how it performs at scale, against different levels of traffic, within cloud-based infrastructure. This would allow Datex to define set metrics and develop requirement profiles for deploying and running their DataStealth solution on virtual infrastructure with confidence, and for different sized customers.

#### CENG MEMBERS



## PROJECT SETUP AND OBJECTIVES

For this CENGN project, Datex was provided 2 bare metal servers in a dedicated and secure project slice on the CENGN infrastructure. A traffic generator on one bare metal server sent data to the DataStealth solution running on the process and engine nodes. On the process and engine nodes, DataStealth anonymized the data using encryption and tokenization. Protected data was then securely vaulted across one or more storage nodes while replacement tokens flowed freely throughout the network.

Prior to beginning the project, Datex had clear performance metrics that they wanted to see DataStealth hit. Datex was able to carry out over 20 different test cases on the CENGN infrastructure ranging from tests to determine optimal and maximum throughput levels of data to testing the storage capabilities of their solution.

## THE CENGN ADVANTAGE

This project was a valuable opportunity for Datex to understand the true performance maximums of DataStealth. CENGN projects provide companies like Datex access to a commercial-grade infrastructure, technical expertise, and exposure to a global ecosystem of businesses.

These resources allow companies to focus on product developments and executing on their test plans as opposed to worrying about building their own testing infrastructure, which is very expensive to construct in terms of equipment and labour. Datex is now equipped with new insights on the performance of their technology and the resources required for different customer deployments.

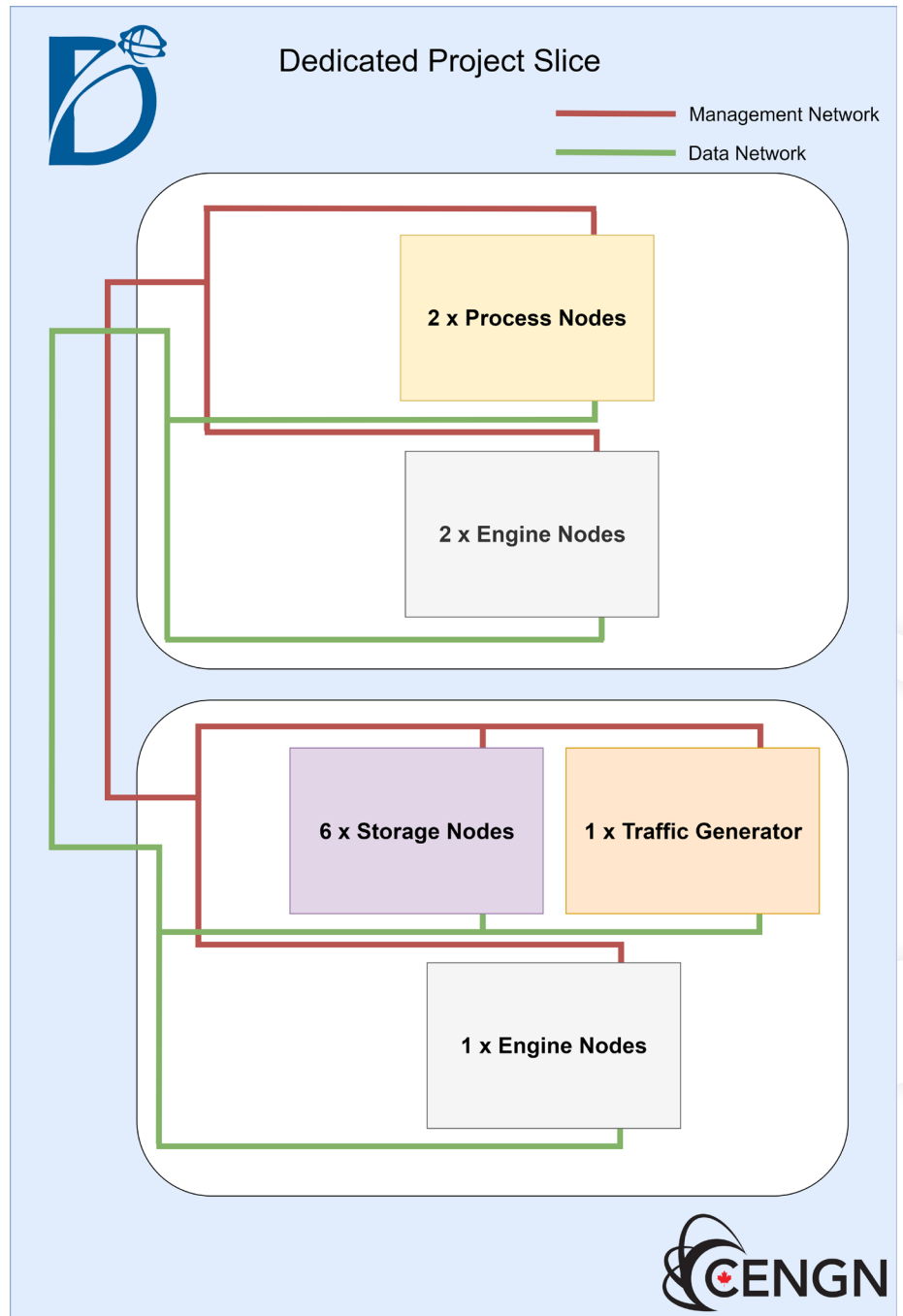


Figure 2: Datex's security platform setup at CENGN