



# ENDURADATA

PROTECTING, DELIVERING AND LEVERAGING DATA

## US SOCIAL SECURITY ADMINISTRATION SUCCESS STORY

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The Social Security Administration (SSA.GOV) signed a five year contract with EnduraData to use EDpCloud software solution to keep its web farm synchronized with devopps servers that process data. EDpCloud replicates confidential and sensitive data for Social Security, Medicare, Medicaid and the Rail Road Retirement Board.

### The challenge

The Social Security Administration is one of the largest US government agencies. It deals with critical and sensitive confidential data of all Americans. US citizens and businesses need access to the data in a very secure fashion. The government agency uses a web farm to allow millions of people to access their own data. Agency branches such as the rail road retirement, Medicaid, and Medicare also need to access the data from different locations and states, in a timely fashion.

The characteristics of the production environment are as follows:

- **RedHat Linux** on many Amazon Cloud virtual machines
- Sensitive personal health data, employer, Medicare, Medicaid data need to be transferred securely
- Data integrity is very critical with full traceability and audit of the data that has been processed
- 24x7 availability, with timely delivery of data despite heavy workloads
- Streamlining data transfer operations with automated error recovery from any point of failure
- Data must be filtered, some must be replicated and some must be blocked from being replicated
- Data must be replicated to many web servers that constitute the web farm
- Permissions and meta data must be preserved or adjusted depending on the files or directories
- The solution must replace Attunity, Qlik Repliweb replication software

### The solution

Our deployment engineers worked with the Social Security Administration engineers and system administrators to deploy and configure EDpCloud file replication from many servers to many servers. After the initial synchronization copy, only file changes (delta file sync) are replicated automatically without generating excess load on the system and while reducing the bandwidth utilization and time required to synchronize a large amount of data. The detailed requirements are discussed in another section of this paper.

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## Key EDpCloud benefits

### Performance

- Replicate only the portion of the files that changed
- Use parallel streams and parallel disk I/O to move and store data efficiently
- Use efficient compression to reduce the amount of data sent
- Control a schedule to synchronize data only during certain times of the day
- Efficient memory and processor utilization.

### Flexibility

- Setup policies to decide what files or directories to include
- Setup policies to decide what files or directories to exclude.

### Resilience and Operational Efficiency

- Automation of file transfers using a visual interface, a scheduler or command line interface
- Integrate EDpCloud on demand synchronization with in-house applications and scripts
- Continuous retry and resume replication from point of failure
- Automate data transfer and reduce manual operation errors
- Use post processing to automate the workflow.

### Security and Compliance

- Data is protected in transit and at rest, reducing risk of leaks and data loss
- Highly secure data transfers, via automatic stream encryption
- Multiple levels of security can be used for authentication between the file senders and receivers
- Use openssl certificates
- Use openssl to authenticate without shared passwords
- Specify what hosts are allowed to send or receive data
- Full audit trail: reporting, statistics, file change and replication history
- Customizable notifications in the event of a failure.

## The requirement document verbatim from SSA stated the following

- The solution must operate on Red Hat Enterprise Linux (RHEL) versions 7.x and 8.x
- The solution must be capable of using the Secure Shell (SSH) protocol for communication and management
- The solution must be configurable to use encryption in transit
- The solution must function via proxies and firewalls
- The solution must be able to handle data sets for replication of up to 50 gigabytes (GB) in size
- The solution must be configurable to run one-to-many (publication) or many-to-many (multi-master replication) schemas
- The solution must be able to monitor source server file systems and duplicate those files/folders/etc. on one or more destination servers
- The solution must support conflict detection (the ability for the software on file copy to determine if it is overwriting a newer version of the file being copied).

- The solution must be able to detect source file name changes and replicate files on that trigger
- The solution must be able to detect file move – if a file is moved from one directory to another, that change must be replicated to the destination server(s)
- The solution must be able to detect and propagate deletes – detect if files are deleted in the source server(s) and propagate those deletes to the destination server(s).

## What SSA did before purchasing EDpCloud?

The following is from the SSA purchasing document (**verbatim**). It details SSA's why SSA chose EnduraData

Size and status of potential sources (see FAR Part 19).

- Techniques for conducting market research include any or all of the following:
  - Contacting knowledgeable individuals in government and industry regarding market capabilities to meet requirements.
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  - Querying the government-wide database of contracts and other procurement instruments intended for use by multiple agencies available at <https://www.contractdirectory.gov/contractdirectory/> and other government and commercial databases that provide information relevant to agency acquisitions.
  - Participating in interactive, on-line communication among industry, acquisition personnel, and customers.
  - Reviewing catalogs and other generally available product literature published by manufacturers, distributors, and dealers or available on-line.
  - Additional information, sources, comments
- SSA engaged with multiple industry experts to seek out potential solutions.

### SSA concluded and stated:

**“Of the solutions reviewed during Market Research, only EnduraData EDpCloud met all the mandatory requirements”**

In addition SSA tested EDpCloud in a proof of concept for over six months.

## The competition and evaluation

According to SSA documents, the solutions below were examined and were found to not meet the agency's requirements above:

- Octopus Deploy
- Software Pursuits SureSync
- N-able Backup
- Kaseya Spanning Backup
- NAKIVO Backup & Replication
- Comet Backup
- Altaro VM Backup
- Resilio Connect.

## Outcomes

The Social Security Administration, Medicaid, Medicare and Rail Road Retirement Board data is being synchronized automatically and efficiently 24/7 using EnduraData. US citizens and the agencies' staff have access to data when they login to their accounts no matter which web server node they login to.

SSA's engineers, stated "We are very impressed with how EnduraData product is working and with how they are receiving services and support from EnduraData engineers".

SSA renewed the subscription for a second year in 2023