Clusterlogics: Backup as a Service with Bareos

Introduction
Cartika Internet Solutions Provider Inc. is a Canadian Internet Service Provider (ISP) based in Toronto, Ontario. Founded in 1999 by Andrew Rouchotas, Cartika started with a small office and a single reseller account. Over the past years the company has grown rapidly. It now has Network Operations Centers and offices in Toronto, Canada, and Dallas, United States. Cartika offers web hosting, virtualization, and various cloud services, including Backup as a Service (BaaS) via Clusterlogics, a web-based platform built on top of Bareos.

From Bacula4 to Clusterlogics
Previously known as Bacula4, Cartika decided to migrate the underlying backup engine from Bacula Enterprise to Bareos and rename the platform to Clusterlogics. Customers can choose between different backup and recovery plans. Like Bareos, Clusterlogics supports all major operating systems (Windows, Linux, and FreeBSD) and database management systems, including MySQL, MS SQL, PostgreSQL, and MongoDB.

Situation
One of the reasons for the move to another backup and recovery solution was the request for more flexibility. Cartika wanted a pure Open Source solution. Rather than paying licensing fees for enterprise modules, the ISP decided to spend money on professional support and the development of missing features built directly into the Bareos engine, i.e. the file table denormalization or the Percona plugin.
Cartika also sponsored Bareos’ LanAddress feature, i.e. the ability for a storage device to operate over the WAN as well as the LAN and automatically connect over the preferred private or public network. This way users with distributed networks can perform a central/decentral backup: If both, file and storage daemon, have an optional LAN address, the client will use the local storage.
Together with Bareos GmbH & Co. KG (the company behind Bareos), Cartika was able to migrate all servers, clients, and databases, as well as customize and integrate Bareos into the Clusterlogics Web UI.

Project Outline

Customer
Cartika Internet Solutions Provider Inc.
20 Pullman Court
Toronto, Ontario, Canada M1X 1E4
https://www.cartika.com/
https://www.clusterlogics.com/

Line of Business
Internet Service Provider
Backup as a Service

Demands
The amount of data has been growing rapidly in recent years and is expected to increase even more. With two Network Operations Centers and numerous customers worldwide, Cartika needs a flexible and reliable backup solution that can deal with storage capacities in the petabyte range.

Solution
The implemented Open Source solution is reliable, flexible, and transparent. It can easily be customized to fit the company’s needs.

Follow-up >>>
**Challenge**
Cartika had to migrate a very large infrastructure including multiple storage arrays, servers and clients across several geographies. It was necessary to convert the Bacula configuration files for all Directors as well as the databases used by the backup engine.
On top of that, Cartika integrated Bareos in the Clusterlogics interface so that customers can centralize their backup and recovery process, even in complex cloud environments. Using Cartika’s customization, customers can backup and recover files, databases, and any virtual machine, hosted on any hypervisor (i.e. Amazon, Google, Microsoft, Digital Ocean, or Cartika). Cartika’s platform offers wizard-based installs and configurations, monitoring and reporting tools.

**Solution**
To automate the migration from Bacula Enterprise to the new backup and recovery system, the Bareos team provided extensive support as well as some Python scripts, i.e. to convert the configuration of the Bacula Director to the Bareos Director. The database catalog required some schema changes – also done by script.
All File Daemons and Storage Daemons attached to the Clusterlogics platform benefit from an automated update process via SSH/public-key authentication (*nix systems) or Active Directory (Windows).
After a trial phase in a test environment, Cartika then migrated their productive environment step by step.

**Results**
The migration went smoothly. After the switch to the Open Source solution Clusterlogics was able to adopt the Bareos engine and integrate it in their Web UI – making it easy to use for everyone.
Cartika’s Backup as a Service product is is also available as white-label solution for Managed Service Providers (MSP’s), Internet Service Providers (ISP’s), and data centers.

**Customer Values**
The new backup solution is highly scalable and flexible enough to deal with the increasing amount of data in different geographies. Bareos is developed under an Open Source license and therefore transparent.

“We were looking for a pure Open Source platform. We’re happy to pay for support and maintenance, or additional features. That way we can contribute back to the community of the Open Source project.”

**Andrew Rouchotas,**
CEO and founder of Cartika Internet Solutions Provider Inc.

“We’re glad to have found Cartika as a Bareos hosting partner. They actively support the Bareos project, and their Clusterlogics platform makes Bareos-based backups available to customers worldwide.”

**Maik Außendorf,**
Managing Director of Bareos GmbH & Co. KG

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Bareos GmbH & Co. KG
Händelstr. 25–29
50674 Köln
Deutschland

info@bareos.de
https://www.bareos.com/