Continuous Data Protection

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Continuous Data Protection (CDP) also called continuous backup or real-time backup, refers to backup of Client data by automatically saving a copy of every change made to that data, essentially capturing every version of the data that the user saves.

Bacula Enterprise's CDP is modern, efficient and fast. It allows the user or administrator to restore data to any point in time. It automatically captures and tracks data modifications, saving every version of user-created data locally or at a target repository. This Module is a true CDP solution: it detects that the file was changed and copies it into a local spool area. The files are then available for immediate recovery locally in a "journal" folder.

Bacula integrates highly effective CDP into its extremely rich backup and recovery environment, presenting a huge advantage to system administrators and users. Bacula's solution is as platform-agnostic as possible, with no particular file system requirements, and no need to use snapshots, etc.

Bacula Enterprise's CDP benefits include:

- Transaction record preservation, where corrupt files are replaced with earlier and clean versions
- Efficient data recovery
- Easy installation and programming, which does not affect stored data

Its CDP characteristics include the following:

- Frequent data changes, due to continuous rewriting of data
- Continuous runtime
- Significant organization-wide impact during system downtime

The Bacula Enterprise CDP feature is composed of two components: an application (cdp-client or tray-monitor) that monitors a set of directories configured by the user, and a Bacula File Daemon plugin responsible for securing the data in a Bacula infrastructure.

You can setup the folders you wish to watch for changes by using the Tray Monitor. The user application (cdp-client or tray-monitor) is responsible for monitoring files and directories and set-up is fast and simple: Open the Tray Monitor options and

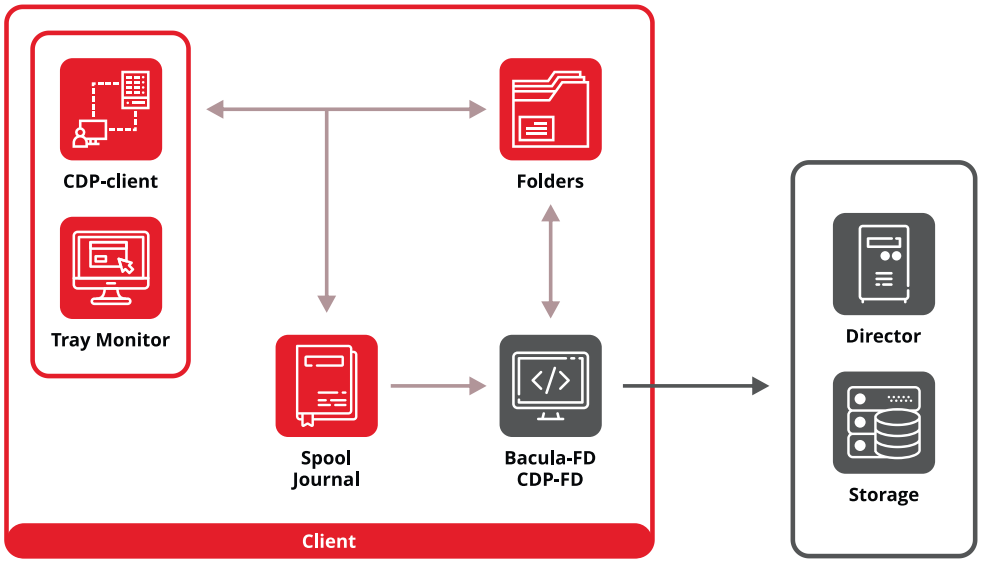

Figure 1: The Bacula Enterprise CDP module

- Click in the option 'Watch' to see a window displaying the watched folders.
- Click in the button Add and select the folder you wish to watch:
- You will then see the watched folder listed.

The Spool Directory contains all files from the watched folders that were created and / or changed. It keeps a copy of every version of the files. The Job reads the journal file to select which files from the Spool Directory will be backed up. After that, the files will be available to be restored at any time.

When a modification is detected, a copy of the new data is created in a spool directory. At regular intervals, a Bacula backup job will contact the File Daemon and will save all the files archived by the CDP-client. The local data can be restored at any time without a network connection to Bacula's Director.

Client behind NAT

Network Translation Address (NAT) remaps one IP address space into another by modifying network address information in the IP header of packets while they are in transit across a traffic routing device. This allows a single device, such as a router, to act as an agent between the Internet (or public network) and a local network (or private network), which means that only a single unique IP address is required to represent an entire group of computers to anything outside their network.

A Bacula Enterprise Client can initiate a connection to the Director (permanently, or based on a schedule) to let Bacula's Director(s) connect back when a new Job is started or a bconsole command such as "status client" or "estimate" is issued.

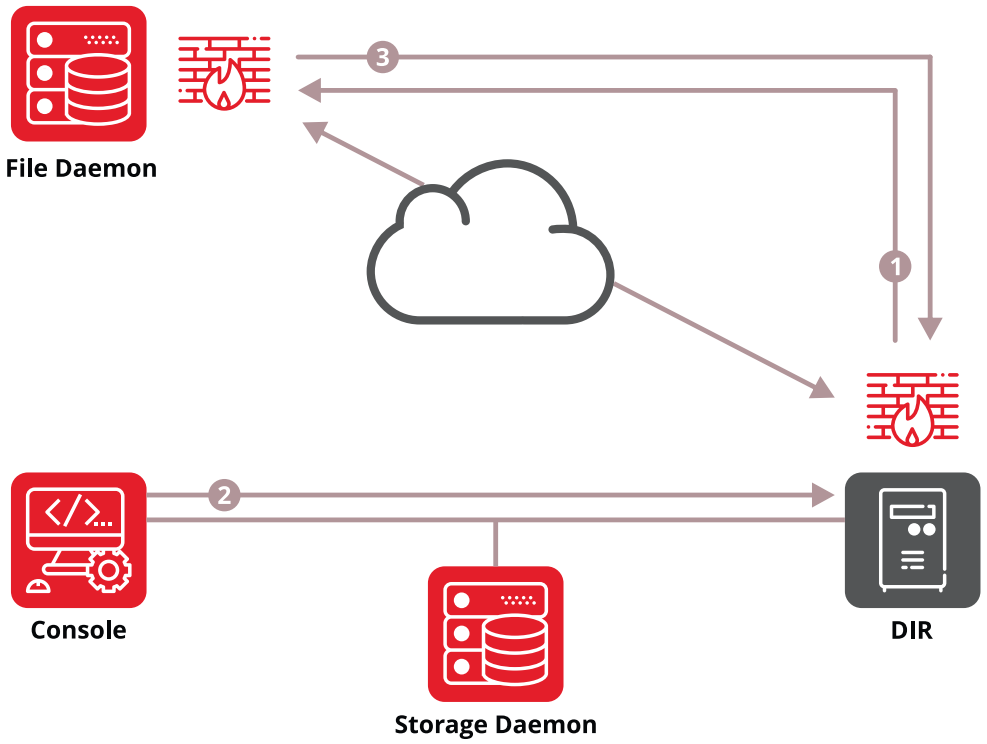

Figure 2: Client behind NAT example

This network configuration option is very useful for Clients that are not directly reachable by the Bacula Director.

It is possible to schedule the Client connection to a specific time, or a certain period in the day. For example, A Job can be scheduled in the Director around 12:00, and if the Client is connected, the Job will be executed like if the Client was reachable from the Director.

Bacula Enterprise's "CDP" and "Client Behind NAT" technologies are available at no extra cost to its customers. Contact Bacula System today to find out more information of its CDP and Client Behind NAT solutions.

Bacula Enterprise is the most flexible, feature-rich backup and recovery solution in the world. Below is a diagram that shows an overview of some if its many features

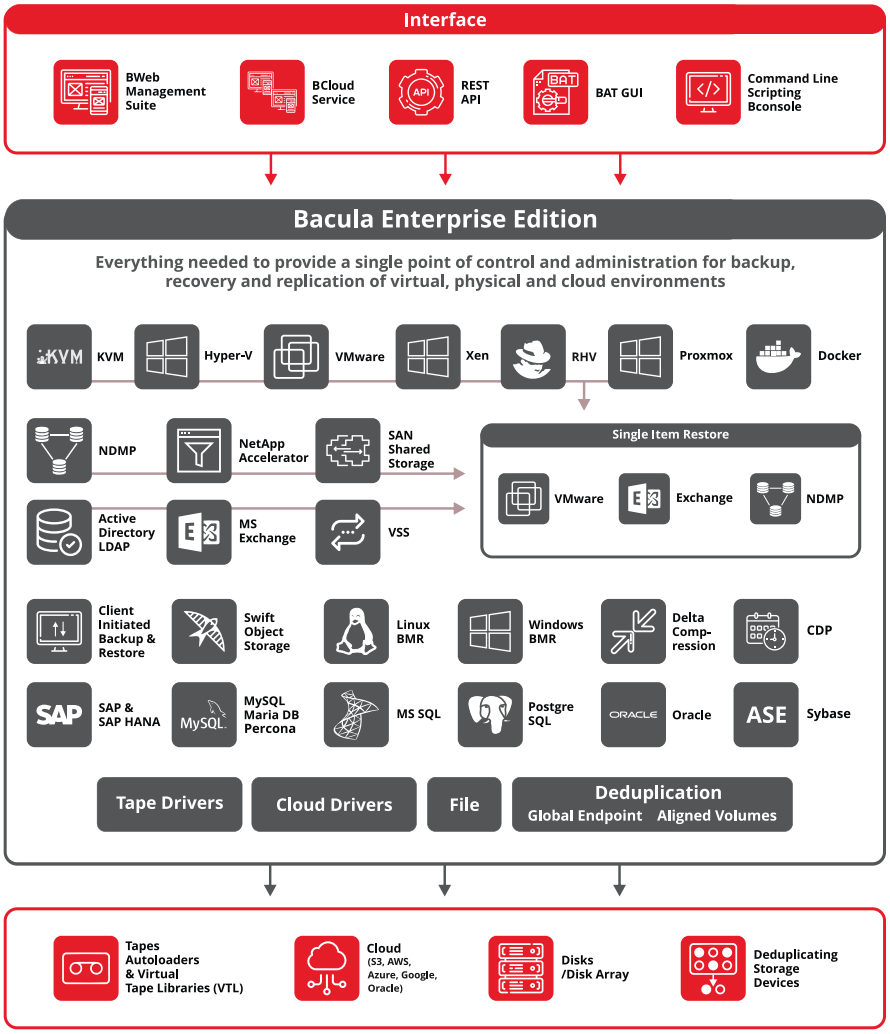

Figure 3: Bacula Enterprise Edition's advanced capabilites