# Glossary

## R1Soft Glossary

The glossary is an alphabetical list of terms with the definitions for those terms. Here you can find the explanations of concepts relevant to R1Soft Backup solutions.

The glossary consists of the following sections:

- General Terms
- Tasks

## Glossary of R1Soft Technical Terminology

Bare-Metal Disaster Recovery | Block Transfer Protocol (BTP) | CDP | CDP Agent | CDP Server | Control Server | Common User | Compression | Data Center | Data Center Node | Defragmentation | Device | Disaster Recovery Boot Media | Disaster Recovery Mode | Disk | Disk Recovery Point / Recovery Point | Disk Safe | Disk Safe Browser | Encryption | Files Restore | Host | Host Administrator / Host Admin | Host Discovery | Incremental Backup | Incremental Disk Image / Incremental | Knoppix | Linux CDP Agent | Live Boot™ Remote Restore | Live CD | Partition Table | PXE Network Boot | Quota | Rotation Policy | RSA Key | Task History | Task Scheduler | Storage Pool | Super User | Task | User Administrator / User Admin | Volume | Volume Administrator | Web Server For Data Centers

### Bare-Metal Disaster Recovery

The ability of a Backup and Restore System to Restore a computer system to a previous state directly to a new unformatted hard Disk or Disks.
To qualify as Bare-Metal Disaster Recovery, a Backup System must Restore all of the following:

- Disk formatting
- Partition Tables
- Master Boot Record
- Operating System
- User Files

See Disaster Recovery Boot Media.

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| General Terms | Tasks |

### Block Transfer Protocol (BTP)

Block Transfer Protocol is the IP-based high performance network protocol used for transferring Backup and Restore data. The BTP service runs on port 1167 and uses TCP. Because BTP uses TCP/IP, it can transfer data between any two (2) computers on the Internet. BTP is highly secure and uses RSA Keys for authentication. All BTP protocol traffic is encrypted using RSA Keys and a Blowfish cipher. Block data (payload) may or may not be encrypted depending on User options.

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| General Terms | Tasks |

### CDP

Continuous Data Protection, also called Continuous Backup, refers to the Backup of computer data by automatically saving a copy of every change made to the data.

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| General Terms | Tasks |

### CDP Agent

CDP Agent is a part of the Continuous Data Protection solution. It is the service or daemon that runs on a computer being backed up by R1Soft. CDP Agents can be installed on Linux or Windows. Installing a CDP (Backup) Agent is required to take Backups of a computer or Restore files. The CDP Agent accepts Backup and Restore requests from CDP Servers. Righteous Backup is licensed based on the number of purchased CDP (Backup) Agents.

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| General Terms | Tasks |

### CDP Server

CDP Server is a part of the Continuous Data Protection solution - the computer running R1Soft CDP Server software. A server may be Stand Alone or a Node that is part of a Data Center Cluster. In the Stand Alone version, the CDP Server provides a Web Interface for management, a Task scheduler to process scheduled Backup jobs, and makes requests to CDP Agents to initiate Backup or Restore jobs. CDP Server licenses are free with purchase of CDP Agents.

| General Terms | Tasks |
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### Control Server

The Control Server is the central controller in a deployment of CDP Server For Data Centers. There may only be one (1) Control Server for each installation of CDP Server For Data Centers. The Control Server houses the database of Hosts and their Backup jobs. It also controls each Node in the Cluster and batches out Backup jobs to available CDP Servers.

| General Terms | Tasks |
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### Common User

Common Users have restricted rights. They may not be permitted to create new Users and Hosts. Common Users can add only Common User accounts. Common Users can administer only the Users which they have Administrator privileges on. Common Users can be denied to change their Password in the system.

| General Terms | Tasks |
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### Compression

Data compression is the process of encoding information using fewer bits than an un-encoded representation would use through use of specific encoding schemes. Disk Safes use zlib also known as gzip compatible compression and are capable of delivering about a 2:1 compression ratio for most environments. Compression is performed at the hard Disk sector level on the Host during a Backup by the CDP Agent. The compressed Disk sectors are sent over the network and stored in its compressed form in the Disk Safe. Compression can be used on its own or in combination with encryption.

| General Terms | Tasks |
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### Data Center

Data Center is a cluster which can consist of one Control Server and one or several connected CDP Servers and Web Servers. The Control Server houses the database of Hosts and their Backup jobs. It also controls each Node (CDP Servers and Web Servers) in the Cluster and batches out Backup jobs to available CDP Servers. The location of the server and the CDP

Server that processes Backups is completely invisible. The advantages of Data Center solution over a stand-alone Backup Server are that user interface requests go to a dedicated server and are not slowed down by the Backup Servers which are busy processing backup and restore jobs.

| General Terms | Tasks |
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### Data Center Node

A point in Data Center (CDP Server or Web Server). The Nodes are managed by Control Server For Data Centers which is the central point in deployment of Backup for Data Centers.

| General Terms | Tasks |
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### Defragmentation

Defragmentation shrinks the unused space in your Disk space freed by deleting or rotating out unwanted Incremental Backups to reduce the Disk usage. The contents of the Disk are physically reorganized to store the pieces of each file close together and contiguously. Much like defragmenting a hard Disk, defragmenting or shrinking the Disk Safe can involve relocating data. Typically, Disk Safes never need to be defragmented as Data Storage usually increases with time. When a Host reduces its Disk usage substantially, defragmenting is typically required.

> Notice
> Due to the change in caching techniques in CDP Server 2x, keeping your Disk Safe defragmented is now of greater importance. The default for the new 2x version installation is 0% (no limit). It is recommended that you set this option to 0% as it will allow you to configure Disk Safes to reduce fragmentation as much as possible.

| General Terms | Tasks |
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### Device

A Device is a Partition on a Host eligible for Backups. For example, on a Linux Host a Device might look like /dev/sda1.

| General Terms | Tasks |
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Disaster Recovery Boot Media

Includes a number of solutions for both Windows and Linux Bare-Metal Restores using physical or network access. See Live CD , Live Boot™ Remote Restore, and PXE Network Boot.

| General Terms | Tasks |
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Disaster Recovery Mode

In the case of disaster or for quick roll-back your CDP Agent can be booted into a special Disaster Recovery Mode using one of theDisaster Recovery Boot Media methods. Once booted into Disaster Recovery Mode, a Recovery Point can be streamed across the network directly onto your Host's hard Disks from the CDP Server.

| General Terms | Tasks |
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Disk

A Disk is a directory or path for storing Backup Data made available to a CDP (Backup) Server. For example, a Disk's path might look like E:\backup-data or a network path like \\nas-device\share.

| General Terms | Tasks |
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Disk Recovery Point / Recovery Point

Disk Recovery Point or Recovery Point is backed up data created by one (1) Backup Task. Righteous Software delivers fast access to any Recovery Point as if it were a complete Disk Image with performance comparable to the native file system. Disk Safes allow any Recovery Point to be deleted, freeing up the Disk space consumed by the Recovery Point, while still maintaining the dependent sectors used by other Recovery Points.

> Note
> Renamed in Version 2. In version 1, named "Incremental Disk Image / Incremental."

| General Terms | Tasks |
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Disk Safe

Data on the CDP Server is stored in Righteous Software's patent-pending Disk Safe storage format. This on-disk format enables the CDP Server to archive point-in-time recovery images for long periods of time using as little Disk space as possible. Scheduled point-in-time Volume snapshots are scheduled on the CDP Server. The CDP Server then periodically connects to the CDP Agent program and synchronizes changed Disk sectors to the CDP Server. The CDP Server creates a new point-in-time image of the Disk Volume every time it connects to the Agent for synchronization. The point-in-time images are called Recovery Points and are stored in a Disk Safe.

| General Terms | Tasks |
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Disk Safe Browser

The Disk Safe Browser allows you to browse your Disk Safes, Devices, and Backup Images in a file system tree. This is also where you initiate Bare-Metal Restores or select combinations of files and directories to Restore.

| General Terms | Tasks |
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Encryption

Encryption is the process of transforming information to make it unreadable to anyone except those possessing special knowledge, usually referred to as a Key. CDP Server supports strong encryption of Disk data using RSA Keys and the Blowfish cipher. During a synchronization, data is encrypted (and optionally compressed) on the Agent and sent to the Server over the network where it is stored in encrypted form. The data can only be decrypted using a RSA Key protected with a passphrase. During a Bare-Metal Restore, Disk sectors are decrypted on the fly at the CDP Agent.

| General Terms | Tasks |
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Files Restore

The Restore Files Task restores a set of selected files and directories. You can Restore files

from the Disk Safe Browser.

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| General Terms | Tasks |

Host

A Host is a computer running a CDP Agent. A Host is any computer that is being backed up by a CDP Server and could be a desktop PC or a "server."

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| General Terms | Tasks |

Host Administrator / Host Admin

By adding Administrators to Hosts, you can control who can access Hosts in the Backup System and what their level of permissions are.

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| General Terms | Tasks |

Host Discovery

The process of adding a new CDP Agent to a CDP Server. During this process, a CDP Agent's RSA Public Key is stored on the server. A Host's physical Partitions or Devices are also automatically discovered during this Task and the Partition Table is imported into the CDP Server.

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| General Terms | Tasks |

Incremental Backup

An Incremental Backup is a Backup method where multiple Backups are kept (not just the last one). These Backups will be Incremental if each original piece of backed up information is stored only once. Successive Backups will only contain the information that changed since the previous Backup.

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| General Terms | Tasks |

Incremental Disk Image / Incremental

See Disk Recovery Point / Recovery Point.

| General Terms | Tasks |
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Knoppix

Knoppix is one (1) of the Linux distributions. The Disaster Recovery Boot Media 2x is based on Knoppix. A number of modifications have been made to Knoppix including removing unnecessary packages to make the ISO size smaller, configuring the buagent to start in Disaster Recovery Mode, and adding the option to start SSH after configuring network settings.

| General Terms | Tasks |
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Linux CDP Agent

A CDP Agent that runs on the Linux operating system.

| General Terms | Tasks |
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Live Boot™ Remote Restore

One of three (3) possible Recovery Methods for both Windows and Linux Bare-Metal Restores (see Disaster Recovery Boot Media ). This method can be used for systems which are accessible over the network and have a working Linux install. It is suitable for Restoring leased dedicated servers. Neither physical access to the server nor PXE Boot are required. In most cases, Linux OS must be (re-)installed on the server before starting Bare-Metal Restore using Live Boot™ Remote Restore.

| General Terms | Tasks |
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Live CD

One of three (3) possible Recovery Methods for both Windows and Linux Bare-Metal Restores (see Disaster Recovery Boot Media ). The ISO image should be burned to a CD-ROM. This method requires physical access to the computer to insert the CD-ROM. It can not be easily automated or initiated remotely.

| General Terms | Tasks |
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### Partition Table

Partition Table is a placeholder for the description of a Partition on the hard Disk. The Partitions are specific areas within the Disk. During Bare-Metal Restore, a Partition Table Restore Task must be run in order to recreate a Partition Table which includes entries for the recovered file systems.

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| General Terms | Tasks |

### PXE Network Boot

One of three (3) possible Recovery Methods for both Windows and Linux Bare-Metal Restores (see Disaster Recovery Boot Media ). PXE Boot is a suitable option for data center automation. With PXE Boot and Righteous CDP Server it is possible to provide a hands-free, fully automated Disaster Recovery and re-deployment system for the entire data center.

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| General Terms | Tasks |

### Quota

Quotas can optionally be set for Volumes and Hosts limiting their Disk usage. A Host level Quota applies to all Data Storage used by the Host including all of the Host's Disk Safes. When a Quota is reached, the Backup job will be interrupted and fail. Volume Quota applies to all Hosts and Disk Safes assigned to the Volume.

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| General Terms | Tasks |

### Rotation Policy

Each scheduled Backup Task can have an associated Rotation Policy. When defining a Backup Task, you can specify how many Incrementals to keep. The Rotation Policy Task will look at all other Incremental Backups created by the same scheduled Task and delete the oldest Incrementals until only the last X Incrementals remain as defined in the Backup Task.

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| General Terms | Tasks |

### RSA Key

RSA is an algorithm for Public-Key cryptography. The letters RSA are the surname initials of the scientists who publicly described the algorithm in 1977. Authentication between the CDP Agent and CDP Server is controlled using RSA Keys. The RSA Key and Backup Key are used when encryption is enabled.

| General Terms | Tasks |
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Task History

Most work performed by the CDP Server is done as a background or scheduled Task. The status and log record for each Task is available for browsing via a "Task History" page. There are two (2) Task History pages:

- Host Task History
- Global Task History

| General Terms | Tasks |
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Task Scheduler

The "Task Scheduler" is a Web Interface used to manage Tasks once they are created. The actions include run, edit, and disable.

| General Terms | Tasks |
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Storage Pool

A collection of Disks used for storing the Backup Data for one (1) or more Volumes. Storage Pools consist of one (1) or more Disks where the data is actually stored. You can increase the capacity of a Storage Pool by adding more Disks to it.

| General Terms | Tasks |
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Super User

Super Users do not have restricted rights. Super Users always have the right to add new Users and Hosts into the system. Super Users can view and administer all Users and Hosts. Super Users are always allowed to change their Passwords.

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| General Terms | Tasks |

Task

Each operation that is completed by a User or by the system is called a Task. You can see the list of Task Types below. You can check the status of the Tasks on the Global or Host Task History page. The Task Scheduler page allows you to view and manage the Scheduled Tasks.

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| General Terms | Tasks |

User Administrator / User Admin

The User Administrator role allows you to administer other User accounts within the system and includes the following privileges:

- viewing User list
- editing User account properties
- deleting User accounts from the system

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| General Terms | Tasks |

Volume

Backups for one (1) or more servers are stored on a Volume. A Volume can be given a Quota to limit its capacity for storing Backup Data. A Volume can be assigned to one (1) or more Users. You can also limit the number of Hosts a User is allowed to add to a Volume. A Volume's data is stored on a Storage Pool and a Volume must be assigned to a single Storage Pool.

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| General Terms | Tasks |

Volume Administrator

CDP Data Centers provides the ability to assign certain Users to Volume(s).

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| General Terms | Tasks |

Web Server For Data Centers

A Node in a Data Center system. The Web Interface is used to provide access to Backup files allowing you to perform File Restores and Bare-Metal Disaster Recoveries without access to Cluster Nodes settings.

| General Terms | Tasks |
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Bare-Metal Disaster Recovery | Block Transfer Protocol (BTP) | CDP | CDP Agent | CDP Server | Control Server | Common User | Compression | Data Center | Data Center Node | Defragmentation | Device | Disaster Recovery Boot Media | Disaster Recovery Mode | Disk | Disk Recovery Point / Recovery Point | Disk Safe | Disk Safe Browser | Encryption | Files Restore | Host | Host Administrator / Host Admin | Host Discovery | Incremental Backup | Incremental Disk Image / Incremental | Knoppix | Linux CDP Agent | Live Boot™ Remote Restore | Live CD | Partition Table | PXE Network Boot | Quota | Rotation Policy | RSA Key | Task History | Task Scheduler | Storage Pool | Super User | Task | User Administrator / User Admin | Volume | Volume Administrator | Web Server For Data Centers

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## Tasks

Backup Task | Bare-Metal Restore Task | CP Restore Files Task | Defragment Task | Delete Disk Recovery Point Task | Delete Disk Safe Task | Delete Host Task | Delete Recovery Point Task | Device Discovery Task | Disk Safe Repair Task | Email Reporting Task | Encryption Setup Task | Host Discovery Task | Host Email Reporting Task | Host Log Cleanup Task | Host Quota Check Task | Log Cleanup Task | Partition Table Backup Task | Partition Table Restore Task | Restore Database Task | Restore Files Task | Rotation Policy Task | System Quota Check Task | Test Agent Task | Verify Disk Safe Task | Make File List Task

### Backup Task

A Backup Task. See Incremental Backup.

| General Terms | Tasks |
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### Bare-Metal Restore Task

A Restore of one (1) or more Disk Images and Partition Tables. See Bare-Metal Disaster Recovery.

| General Terms | Tasks |
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### CP Restore Files Task

A Restore Files Task initiated by a control panel user.

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| General Terms | Tasks |

### Defragment Task

Launched by a Backup Task according to the free space limit defined in the Disk Safe. Shrinks Disk Safes when the free space limit has been reached or exceeded.

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| General Terms | Tasks |

### Delete Disk Recovery Point Task

Deletes a Backup of a Partition Table from a Disk Safe.

> **Note**
> Renamed in Version 2. In Version 1, called "Delete Disk Incremental."

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| General Terms | Tasks |

### Delete Disk Safe Task

Deletes a Disk Safe from the Volume where it resides.

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| General Terms | Tasks |

### Delete Host Task

Deletes a Host and all of its Disk Safes.

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| General Terms | Tasks |

### Delete Recovery Point Task

Deletes an Incremental Backup from a Disk Safe.

> Note
> Renamed in Version 2. In Version 1, called "Delete Incremental."

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| General Terms | Tasks |

#### Device Discovery Task

A sub-Task of Host Discovery that discovers the Devices available for Backup.

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| General Terms | Tasks |

#### Disk Safe Repair Task

(New in Version 2) Disk Safe Repair repairs Disk Safes automatically if there is an unclean shutdown. This Task can be launched manually as well.

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| General Terms | Tasks |

#### Email Reporting Task

The "Schedule Email Reporting" feature allows you to have email sent to the email address of your choice containing information about Tasks.

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| General Terms | Tasks |

#### Encryption Setup Task

Connects to the CDP Agent and retrieves the encryption Keys necessary for creating a new Disk Safe with encryption.

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| General Terms | Tasks |

#### Host Discovery Task

Adds a new Host to the Backup System and discovers Devices available for Backup.

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| General Terms | Tasks |

Host Email Reporting Task

The "Schedule Email Reporting" feature allows you to have email sent to the email address of your choice containing information about a Host's Tasks.

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| General Terms | Tasks |

Host Log Cleanup Task

Deletes old Log Messages.

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| General Terms | Tasks |

Host Quota Check Task

Performs a Quota Check for a Host and all of its Disk Safes comparing actual Disk usage to the usage recorded in the Quota. This Task can fix Quota discrepancies that might occur when the Backup System experiences an unclean shutdown.

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| General Terms | Tasks |

Log Cleanup Task

A Backup System-wide Task that launches Host Log Cleanup Tasks for every Host on the system.

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| General Terms | Tasks |

Partition Table Backup Task

A sub-Task of Backup responsible for backing up the MBR (Master Boot Record) and Partition Table for a Device.

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| General Terms | Tasks |

Partition Table Restore Task

A sub-Task of Bare-Metal Restore. Responsible for Restoring a Partition Table and/or MBR (Master Boot Record).

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| General Terms | Tasks |

Restore Database Task

The Task can be used if MySQL Add-On is enabled.

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| General Terms | Tasks |

Restore Files Task

Restores a set of selected files and directories.

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| General Terms | Tasks |

Rotation Policy Task

A Task launched by a Backup Task that decides if and which Incrementals (Recovery Points) should be deleted to satisfy Backup retention policies.

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| General Terms | Tasks |

System Quota Check Task

A Backup System-wide Quota check that launches Host Quota Check Tasks for all of the Hosts on the system.

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| General Terms | Tasks |

Test Agent Task

Tests connectivity between the CDP Server and CDP Agent.

| General Terms | Tasks |
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### Verify Disk Safe Task

The verify option for Backup only verifies the last Recovery Point instead of all of the Recovery Points.

| General Terms | Tasks |
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### Make File List Task

Generates a fast indexed list of files and meta-data during Backup Task.

> **Note**
> Make File List is no longer exists in Version 2. Browsing a Recovery Point reads it in real-time, as if a Recovery Point were a read-only hard Disk.

| General Terms | Tasks |
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Backup Task | Bare-Metal Restore Task | CP Restore Files Task | Defragment Task | Delete Disk Recovery Point Task | Delete Disk Safe Task | Delete Host Task | Delete Recovery Point Task | Device Discovery Task | Disk Safe Repair Task | Email Reporting Task | Encryption Setup Task | Host Discovery Task | Host Email Reporting Task | Host Log Cleanup Task | Host Quota Check Task | Log Cleanup Task | Partition Table Backup Task | Partition Table Restore Task | Restore Database Task | Restore Files Task | Rotation Policy Task | System Quota Check Task | Test Agent Task | Verify Disk Safe Task | Make File List Task