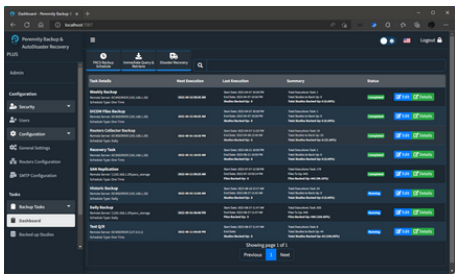
PERENNITY

# PRODUCT TECHNICAL SPECIFICATIONS

## Perennity Auto Backup & Disaster Recovery PLUS



## GENERAL DATA

| | |
|---|---|
| Name: | Perennity Auto Backup & Disaster Recovery PLUS |
| Tradename: | Backup & DR PLUS |
| Country of origin: | Guatemala–Belgium |
| document date: | August 31, 2022 |
| Revision: | 0 |

Fully automated, 100% DICOM all-in-one VNA solution for Backup and Disaster Recovery. It can also be used as a mirror of PACS storage units and as a tool for PACS migration from one vendor brand to another.

It has three main options: automatic scheduling of backup tasks, immediate query and recovery of DICOM studies, and; disaster recovery mode.

**Automatic scheduling of backup tasks**
This option is used to make a normal backup, and/or a mirror replica of the PACS storage units, and/or centralize studies from different remote servers.

**Query / Retrieve DICOM** (regular backup)
- Task Settings
- Backup Origin
  - Remote server (choose server)
- Order
  - Ascending (oldest study to newest)
  - Descending (newest study to oldest)
- Scheduling Type
  - One time
  - Daily
  - Weekly
  - Monthtly
- Start Date
  - Start time
- Repeat every xx days (daily, weekly, monthly)
- Filter By
  - Study Date
  - Study description
  - Study ID
  - Modality
  - Patient ID
  - Patient name
  - Accession number
  - Any other DICOM field
- Task Restrictions
  - Restriction types
  - By dates
  - By hours
  - By task there are
- Backup storage unit
- Save and schedule the task

**DICOM Files** (mirror of PACS storage units)
- Task Settings
- Backup Origin
  - Local drive / network drive
- File Backup Type
  - Incremental (will replicate only new files)
  - Decremental (will replicate all new files and those that have had changes)
- Index DICOM Files (Yes or No)
- Require Authentication (Yes or No)
- Scheduling Type
  - One time
  - Daily
  - Weekly
  - Monthly
- Start Date
  - Start time
- Repeat every xx days (daily, weekly, monthly)
- Filter By
  - Study date
  - Study description
  - Study ID
  - Modality
  - Patient ID
  - Patient name
  - Accession number
- Task Restrictions
  - Restrictions Types
    - By dates
    - By hours
    - By existing task
- Backup Storage Unit
- Save and Schedule the Task

**Synchronization from remote router** (centralize studies from different remote servers)

- Task Settings
- Backup Origin
  - Remote DICOM router
- Scheduling Type
  - One time
  - Daily
  - Weekly
  - Monthly
- Start Date
  - Start time
- Repeat every xx days (daily, weekly, monthly)
- Filter By
  - Study date
  - Study description
  - Study ID
  - Modality
  - Patient ID
  - Patient name
  - Accession number
- Task Restrictions
  - Restrictions types
    - By dates
    - By hours
    - By task there are
- Backup Storage Unit
- Save and Schedule the Task

**Query and immediate retrieval of DICOM studies**

This option is used to copy a file from any server and back it up immediately using different search arguments.

- Inmediate Query / Retrieve, search arguments:
  - Patient ID
  - Patient name
  - Accession number
  - Study ID
  - Study Description
  - Study Date
  - Name of the institution
  - Referring doctor
  - Modality

**Disaster recovery mode**

By activating this function, the modalities send their studies to the backup equipment during the time that the PACS is out of service, the received studies are marked to identify them. When everything is back to normal, the backup equipment returns the studies received to the PACS.

There are two options to address the recovery mode: temporarily grant the PACS address to the backup equipment or create an alternative address for the case of contingency to each of the modalities.

- Enter Temporary AET
- Enter Temporary Port
- Identify the Recovery Server

**Tracking, reports, and statistics**

There are options to monitor the studies that have been supported within a period, this monitoring can be done for all modalities or for a particular modality. It is also possible to generate reports for printing or exporting them to Excel or CSV format.

**Users**

It allows creating different users with operator roles or recovery and search. You are notified by email to activate your account.

**General settings**

Allows you to set the DICOM configuration of the backup server.

- **DICOM Configuration**
  - AET
  - Port
  - Latency (seconds)
  - Concurrent tasks (number of tasks)
  - Log level (info or debug)
  - Remote DICOM servers
- **Forwarding rules** (if you want to receive studies and forward them to another remote DICOM server)
  - Transfer of accepted syntaxes
- **HL7** (used to restore interpretation and diagnostic reports)
- **Storage** (used to create mirrored storage drives)

- **Router Configuration**
  - Port
  - Latency (seconds)
  - Concurrent tasks (number of tasks)
  - Active cache
  - Cache days

- **Definition of Remote Servers**
  - Transfer of accepted syntaxes
- **HL7** (used to restore interpretation and diagnostic reports)
- **Q/R and Filters**
- **Transfers**

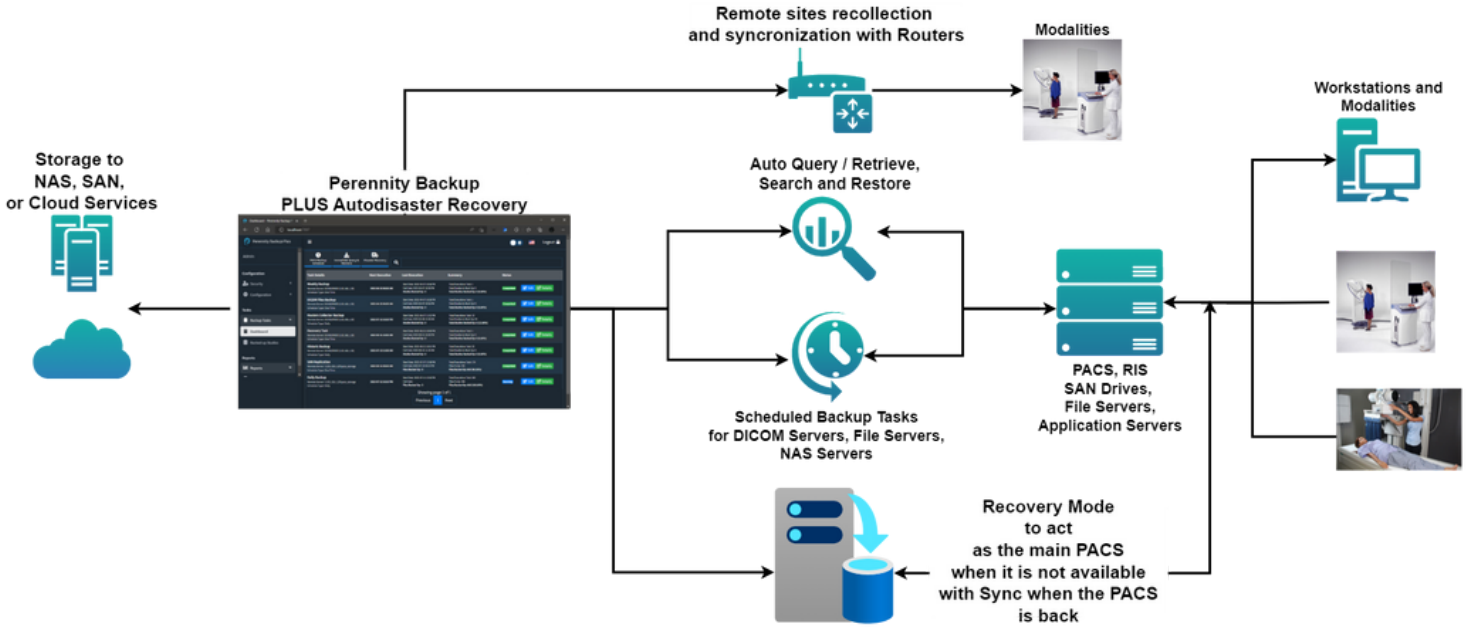
- **SMTP Configuration**
  - Server
  - Port
  - Encryption
    - SSL
    - TLS
    - None
  - Sender Email
  - Sender name
  - User
  - Password
  - Confirm password
  - Test Email

## Technical specifications

The application runs on NAS or SAN systems of any brand (Synology or Silent Bricks are suggested) using Windows Server 2016 or higher operating system.

## Security Scheme

It is classified as Class Level "A" by the major forensic platforms (immuniweb.com, securityheaders.com, etc.) that monitor and diagnose security. If a higher degree of security is desired, equipment that allows working with WORM (Write Once Read Many) protocols can be chosen.




## Technical specifications for each Router

The only thing that needs to be installed on the client side in each remote location is a Router (software that the same platform provides). As many Routers as necessary can be installed, depending on the number of remote locations that need to be connected to the portal.

- The equipment resources that the Router requires are minimal since its only task is to collect studies. These are the requirements
  - Processor: 2.5 GHz Intel Core i5 or mid-range Xeon
  - 4 GB RAM
  - 20 GB or more of free space
  - Internet connection
  - A rule in the firewall to open a port on the local network, not the internet, established in the Router configuration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