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Essex Italy - Backup and Restore Policy

The purpose of this document is to provide a general overview of the main elements of the back-up and restore architecture of the data hosted within Essex Italy's premises in Quattordio. The details of the back-up and restore procedures are provided in the document"Documentazione Backup Veeam +Cloudberry .pdf".

1. BACK-UP INFRASTRUCTURE

The elements of the Back-up infrastructure are listed below:
- NAS server **NETAPP1**.it.eu.spsx.com (10.247.160.42).Model: FAS 2220 with double-head.
- Backup Server **QUPR-BACKUP03**.it.eu.spsx.com (10.247.160.53) with Cloudberry Back-up 7.6.1.71 and Veeam & Replication 11 software. The server is a virtual
machine hosted on the server **QUPR-ESX03.it.eu.spsx.com** Esxi standalone node.
- SAN Back-up **QUPR-BACKUP1**.it.eu.spsx.com server FAS2520 single head with 12 disks with 1,62TB di of capacity.
- VMware Infrastructure 6.7 with 2 physical nodes (HP DL380 servers with ESXi OS installed, **QUPR-ESX01**.it.eu.spsx.com and QUPR-ESX02.it.eu.spsx.com).
-NAS server **QNAP1**.it.eu.spsx.com (10.247.160.129).
-**USB** external Drive**.**
-**AWS S3** storage account in the Cloud.

2. BACK-UP TARGETS

The data which are backed up can be divided in two main categories: network/CIFS data and virtual machines.
The CIFS data that are backed up are listed below:

\\netapp1\DATA ------> Common folders
\\netapp1\UTENTI ------→ Users home directory

The virtual machines which are backed up are included in the list below (note that not all virtual machines hosted in the vSphere infrastructure are backed up):

QUPR-CYBERPLAN: VM hosting the planning tool.
ESSEXITSQL4:VM hosting the new SQL 2008 server and HR database.
ESSEXITSQL5:VM hosting the SIPI and PICS application.
ESSEXITLOG1/QUPR-LOG03: VM for the Administrator's log.
QUPR-PRINT01: Windows Print Server, backed up only in the monthly job.
QUPR-SQL06: VM collecting data from the KDT sensors.
QUPR-APPKDT01: VM hosting the application for the visualization of the KDT data.

3. JOB DEFINITIONS

CIFS data are backed up via Cloudberry, virtual machines data are backed up via Veeam Backup and Replication.
For local backups, the target is the Netapp qupr-backup1. Back-up schedules and retentions are detailed in the document "Documentazione Back-up Veeam&Cloudberry.pdf". Basically back-up retention is: for daily backups, the last month; for monthly backups the last 12 months.
Database back-ups are managed via SQL maintenance plans. Back-ups are Located in the share Qnap1\BackupSQL. The servers which have SQL back-up are the following:

ESSEXITSQL5 (SIPI and PICS)
ESSEXITSQL4 (SELEWIN and ECOSWEB).
ESSEXITLOG1/QUPR-LOG01 (Privacy log).
QUPR-CYBERPLAN

4. AWS S3 AND OFFLINE BACK-UP

CIFS data are also backed-up on a daily basis to AWS S3 account. Additionally, every 3 months an offline copy of the shares UTENTI and DATA is also performed (with an external USB drive).

5. RETENTION POLICY

The adopted retention policy is to keep the last month online and the last 12 months of monthly backup (on the local back-up SAN). For AWS Cloud back-up the retention is 1 month. For database back-ups, hosted on the Qnap1, there's no specific retention, as a manual cleaning process is performed twice per year.

6. RESTORATION TESTS

On a periodical basis (every 3-4 months) a restoration test is performed by the IT personnel in order to validate the backed up data. This restoration test includes the restore of a CIFS data folder andthe restore of a single virtual machine. Ideally for each test a different folder and a different virtual machine are chosen. The destination of the CIFS restored data can be:

- a specific folder located on theNAS Qnap1.it.eu.spsx.com \\QNAP1\BACKUPVARI
- one of the Windows servers.

The destination of the restored VM can be either the back-up datastore on the storage Qnap1 or one of the other datastores.
Evidence of restore tests is kept in the Excel file RESTORE TEST.xlsx

7. REVISION HISTORY

Revision Number	Date of Change	Responsible	Summary of Change
1	16/11/2021	Andrea Di Felice	New format,revision history and new header
2	12/08/2022	Andrea Di Felice	Server names
3		Andrea Di Felice	