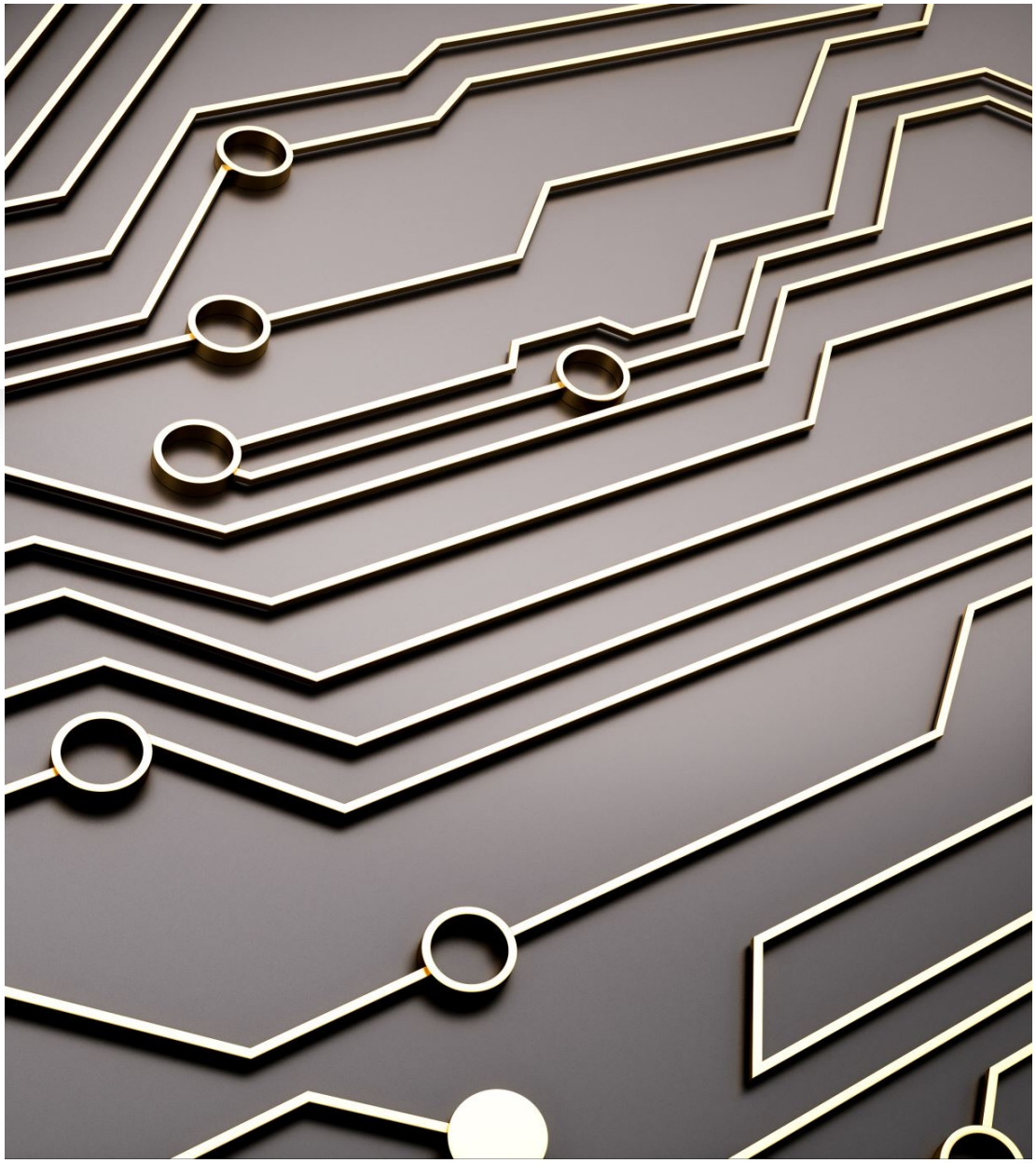
Thales HSM & KSM

Analisi condotta da Luisa Mele

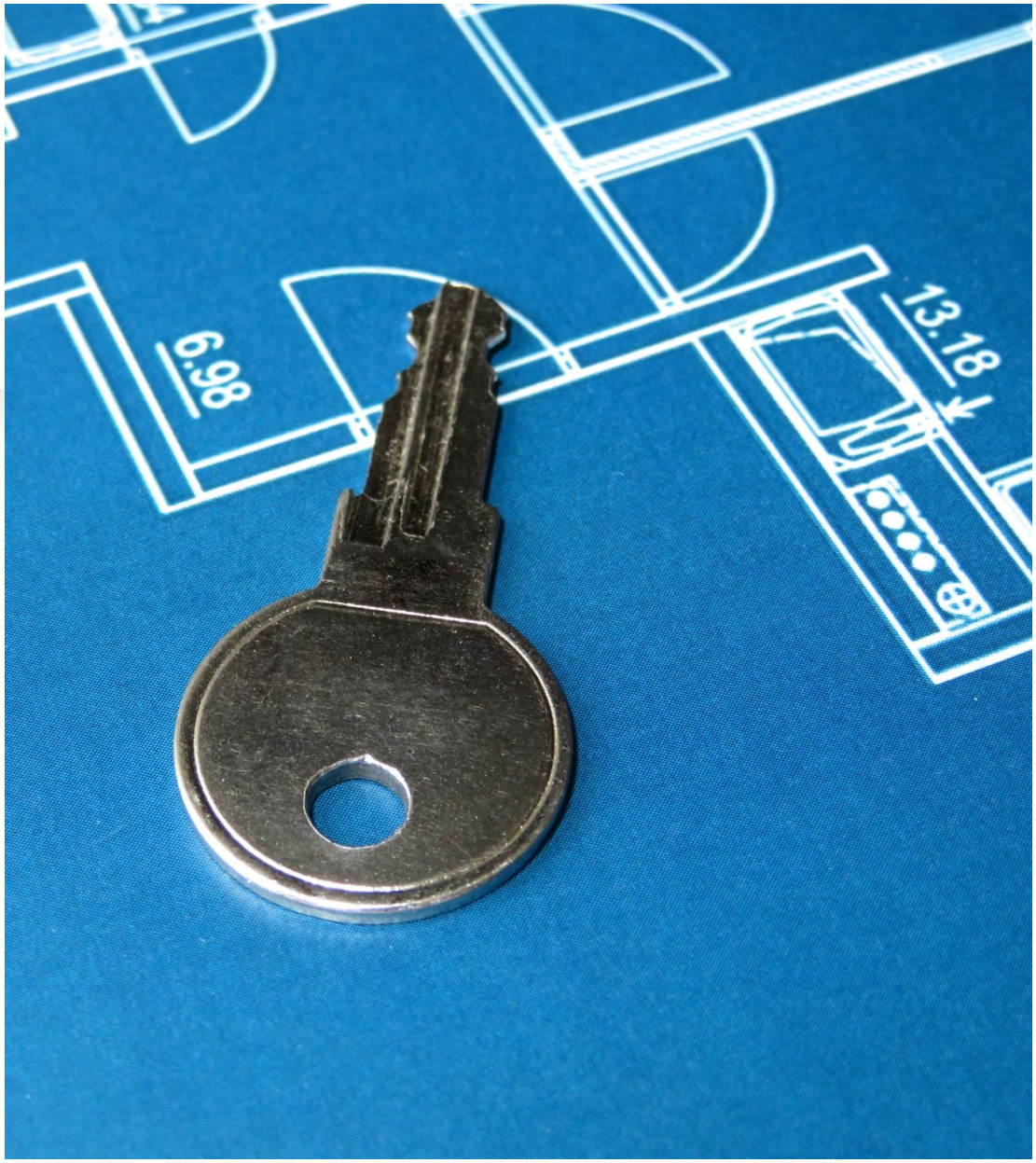
HSM AND CSM

- Key management system is used to provide streamlined management of the entire lifecycle of cryptographic keys according to specific compliance standards, whereas an HSM is the foundation for the secure generation, protection and usage of the keys.
- Hardware Security Mode
- Key management System



KSM

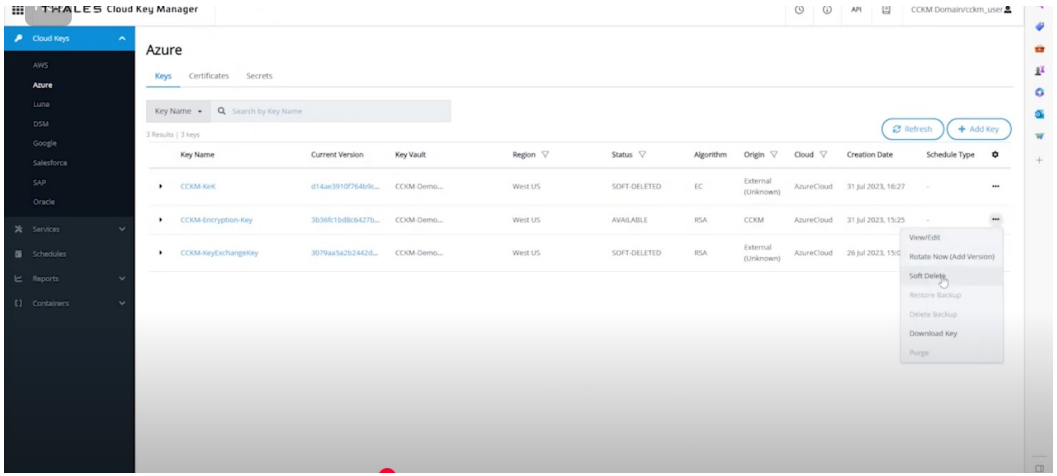
- Generare, proteggere, storare chiavi crittografiche
- Controllare e gestire la rotazione delle chiavi
- Mantenere una copia di backup
- Audit logs
- Cancellare materiale sulle chiavi



Azure e KSM

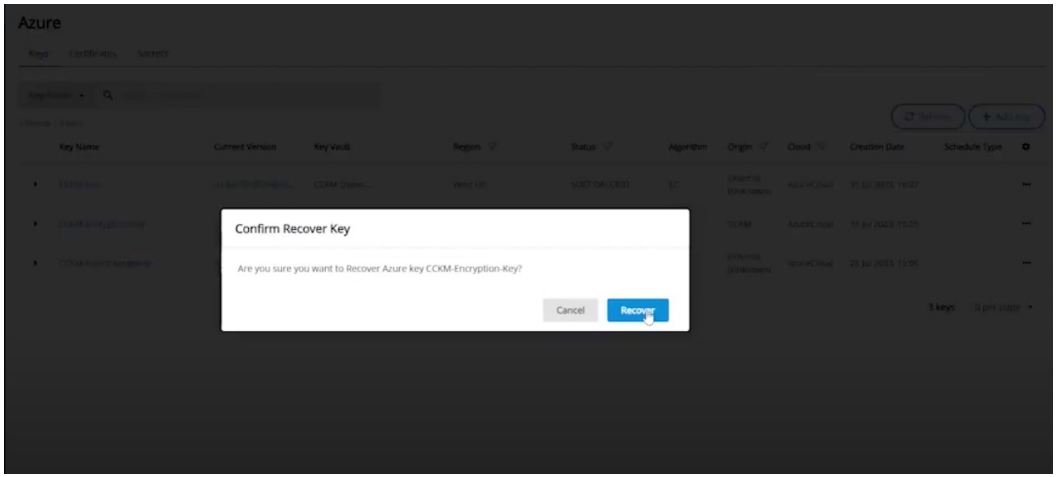
- Andare su Azure (nello storage Account) >
- Encryption parameter > Encryption type ‘’Custom managed keys’’
- Andare su Thales Interface > Cloud key Manager Tab >Azure Cloud Keys (qua abbiamo visibilità su tutte le chiavi disponibili
- Tornare su Azure> Fileshare> fare upload di un file (se si ha accesso a encryption-decryption keys)> visualizzare il file

Delete



- Tornare su Thales, andare sul menù a tendina indicato da ‘’-’’ e cliccare ‘’soft delete’’.
- Ora, se torniamo su Azure, non abbiamo più accesso alla share, in quanto abbiamo appena cancellato la chiave di decrittazione.

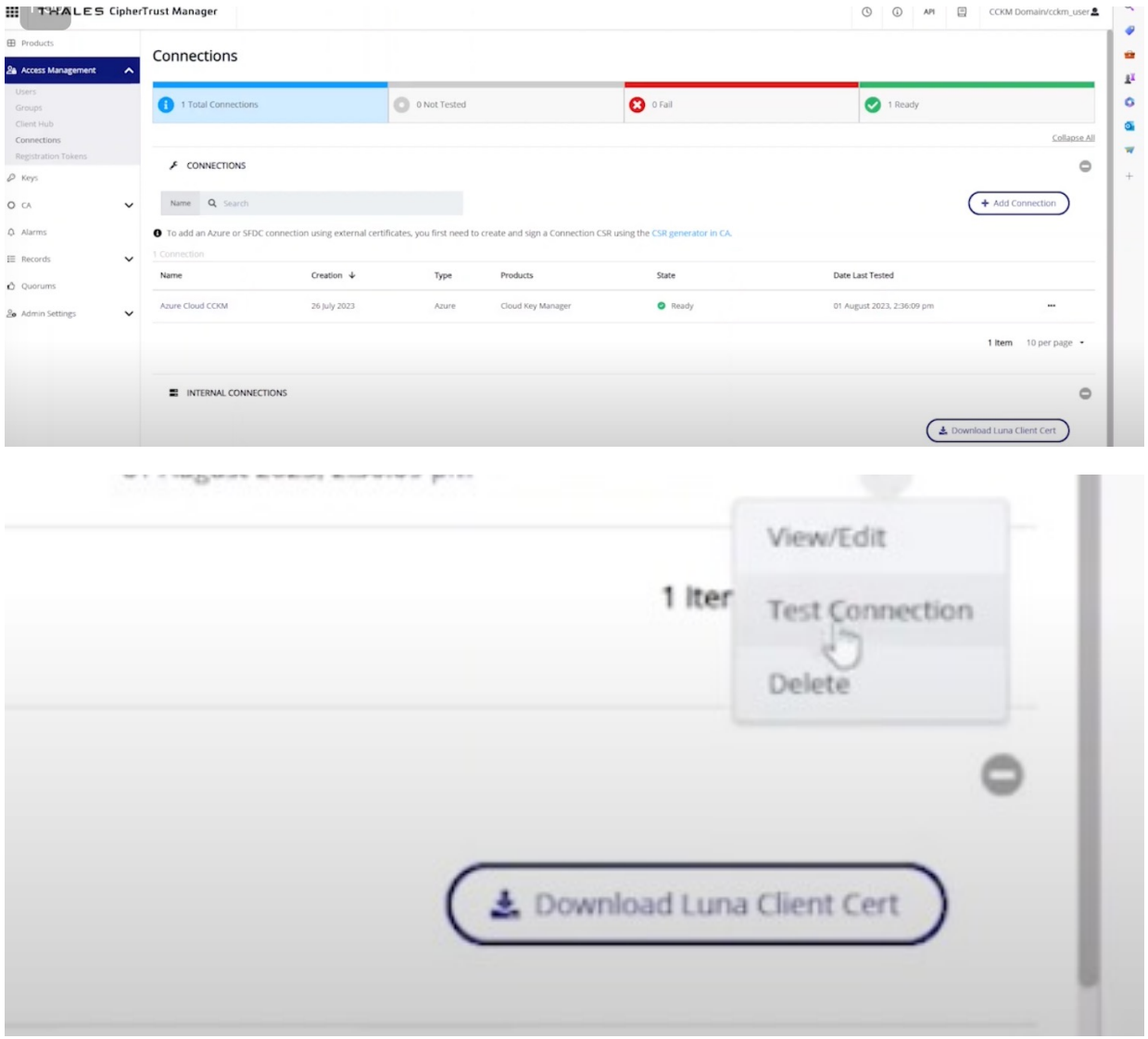
Recovering



- Possiamo ancora recuperare la chiave e avere nuovamente accesso al file

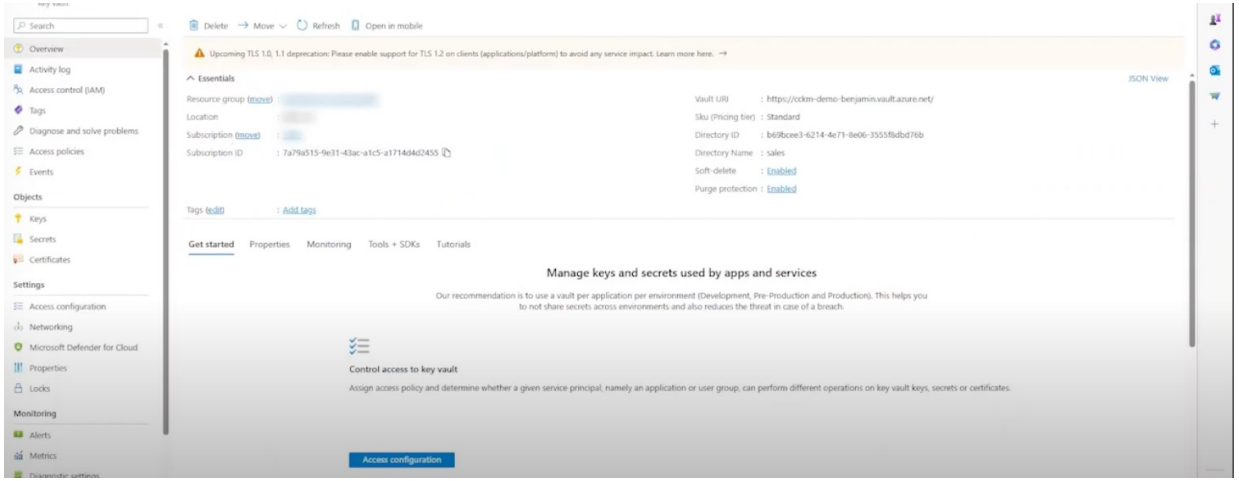
Connessione ad Azure

Da questa interfaccia possiamo gestire la connessione ad Azure, possiamo anche testare la connettività

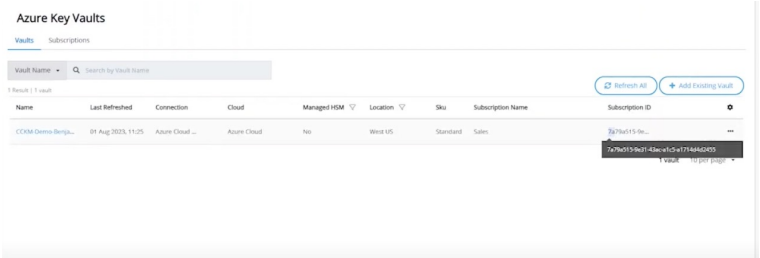


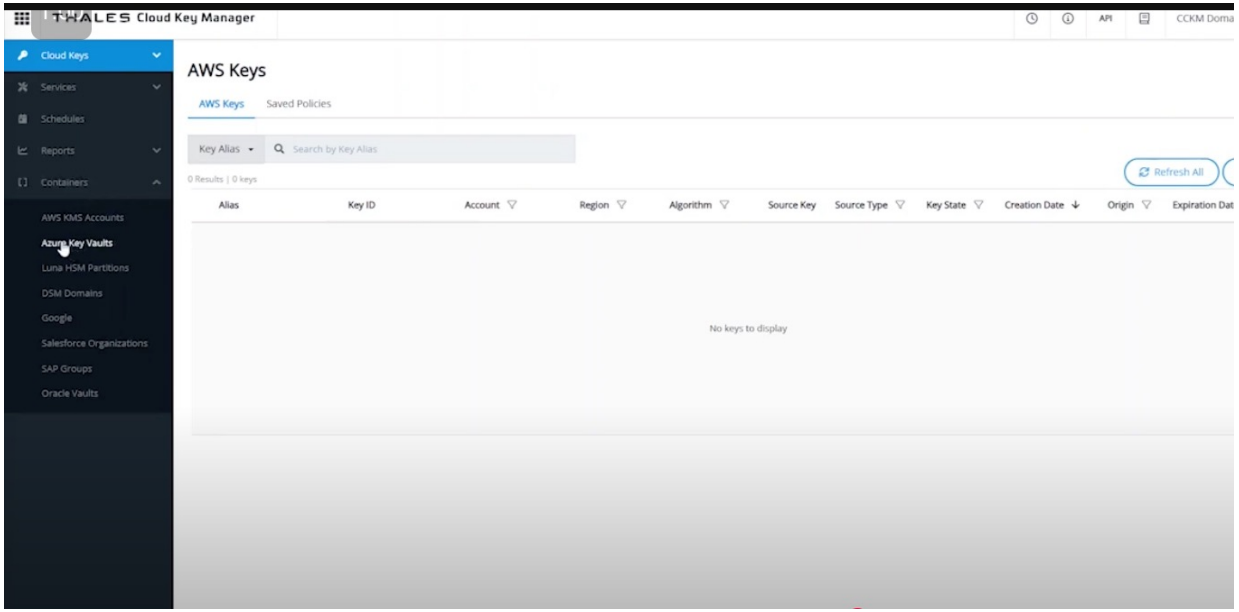
Key Vault on Azure & Thales

- In questa interfaccia di Azure abbiamo il nostro Key Vault con il subscription ID.



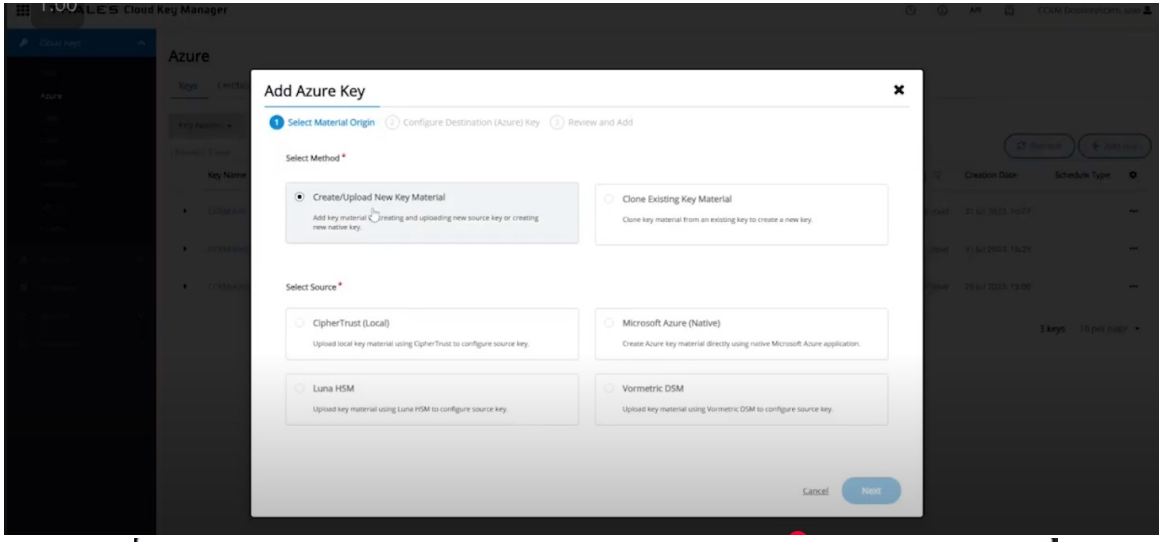
- Il key vault è visibile da Thales come un container con lo stesso ID

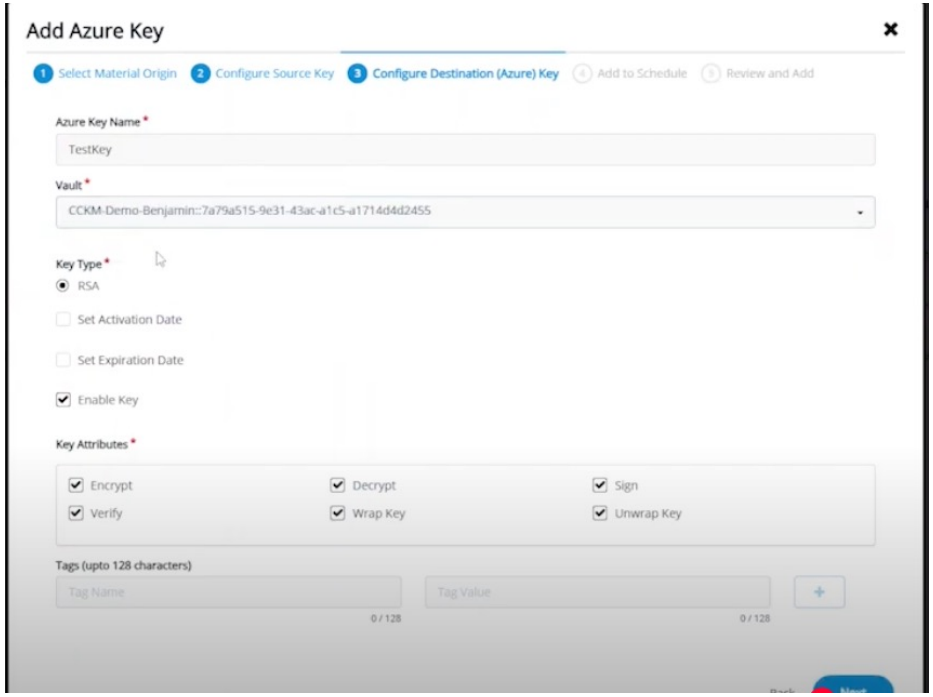




Creare nuove chiavi

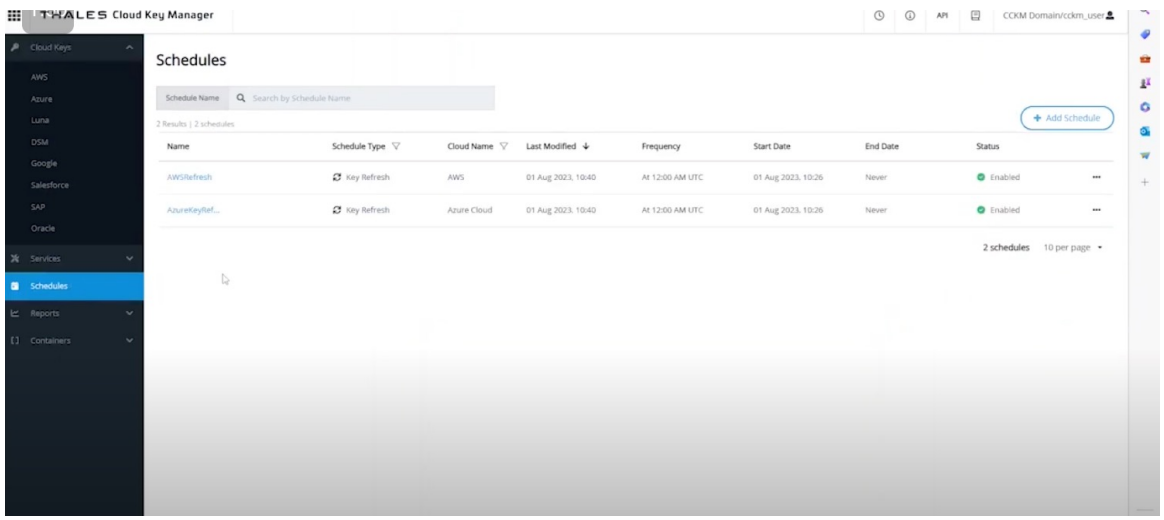
- Da Thales possiamo creare nuove chiavi, scegliere il Vault in cui fare l’upload della chiave, la chiave verrà mostrata su Azure ‘’keys’’





Key rotation

- Da ‘’schedules’’ su Thales, possiamo scegliere la key rotation



Keys in Hardware	keys never leave tamper-proof root of trust in plain text form	keys need to be created, managed and stored securely
Compliance	establish trust with a FIPS 140-2 validated HSM	FIPS 140-2 level 3 HSM secures the PKI encryption key
Key Control	control your keys and ultimately your data	generate keys in on-premises, tamper proof HSM
Disaster Recovery	business continuity	secure copy of key in your possession (DR)
Flexibility	take your keys where you want to go	ability to use the same key in multiple clouds
Secure Backup	hardware to hardware backup	encryption keys need to be securely backed up

Benefits of HSM