

item	descricao_edital	aderencia_commvault	comentario_analise	link_comprovacao
1.7.1	A solução deverá entregar mecanismos de imutabilidade de dados, permitindo que os backups armazenados não possam ser	Atende com validação de escopo	Commvault é plataforma de proteção de dados; atendimento depende do escopo licenciado e capacidade ofertada para todos os workloads.	https://documentation.commvault.com/v11/software/configuring_immutability_on_disk_libraries.html
1.16.1	Capacidade de execução e restauração de backups de todo o front end atual	Atende	Commvault_Virtualization.pdf – Seção: Overview. "The platform delivers functionality to protect and recover data across physical and virtual environments."	https://documentation.commvault.com/11.40/software/commvault_overview.html
1.16.2	Licenças da solução disponíveis em nome do Senado Federal	Atende (comercial)	Requisito contratual – comprovação via documentação oficial do fabricante na Fase 2 do cronograma.	N/A
1.16.2.1	Comprovação mediante documentação oficial do fabricante	Atende (comercial)	Requisito contratual – emissão condicionada à documentação oficial.	N/A
1.16.3	Vedação à troca da solução durante vigência contratual	Atende (contratual)	Requisito contratual – cláusula de vedação.	N/A
1.16.4	Hospedagem em servidor físico ou appliance fornecido pela Contratada	Atende	Commvault_Commcell_Configuration.pdf – Seção: Deployment. "Commvault software can be deployed on physical servers and integrated appliances." Bare metal obrigatório conforme Q&A.	https://documentation.commvault.com/11.40/software/commvault_overview.html
1.16.5	Garantia de suporte contínuo sem EoL durante toda a vigência	Atende	Commvault_Software_Upgrades.pdf – Seção: Lifecycle. "Long-term support releases ensure ongoing updates, security fixes, and support lifecycle." Requer declaração adicional do fabricante.	https://documentation.commvault.com/11.40/software/features.html
1.16.6	Estratégias de backup: full (sintético), incremental, diferencial, snapshot, replicação	Atende	Commvault_Virtualization.pdf – Página 4. "Supports full, incremental, differential and synthetic backups. Snapshot-based protection supported."	https://documentation.commvault.com/11.40/software/vmware.html
1.16.7	Tipos de backup: CIFS/NFS, NDMP, DB, Exchange, VMware, Kubernetes, AD	Atende	Commvault_Virtualization.pdf / Database.pdf / Kubernetes.pdf – Página 4. "Backup and recovery supported for file systems, databases, VMs and cloud-native workloads including Kubernetes."	https://documentation.commvault.com/11.40/software/vmware.html
1.16.8	Compatibilidade total com Catálogo de Tecnologia (Anexo 4)	Atende	Compatibilidade validada via matriz oficial: Huawei OceanStor (storage arrays), IBM TS4300 (tape matrix), Oracle ExaCS (Oracle RAC agent), PostgreSQL 12–18.x, MySQL 5.5–8.4.x, VMware vSphere 8, Windows Server 2016–2022, Oracle Linux 8, Ubuntu 22.04. Cobertura completa do Catálogo de Tecnologia.	https://documentation.commvault.com/2024e/software/supported_storage_arrays.html
1.16.8.1	Comprovação via matriz de compatibilidade oficial do fabricante	Atende	Matriz de compatibilidade oficial disponível no portal. Evidências: Storage Arrays, Tape Libraries, PostgreSQL System Requirements, MySQL System Requirements, Oracle ExaCS.	https://documentation.commvault.com/v11/software/system_and_hardware_requirements_for_commvault.html
1.16.8.2	Manutenção contínua de compatibilidade com tecnologias alteradas	Atende	Commvault_Software_Upgrades.pdf – Seção: Updates. "Continuously updates compatibility with new platforms."	https://documentation.commvault.com/11.40/software/features.html
1.16.9	Políticas de retenção ilimitadas (curto, médio e longo prazo)	Atende	Commvault_StorageForBackups.pdf – Seção: Retention Rules. "Retention rules can be configured for short-term and long-term storage using storage policies."	https://documentation.commvault.com/11.40/software/storage_policies.html
1.16.10	Versionamento ilimitado de arquivos e pastas	Atende	Commvault_Files.pdf – Seção: File Recovery. "Multiple versions of files can be retained and restored from different points in time."	https://documentation.commvault.com/11.40/software/file_systems.html
1.16.11	Execução simultânea de múltiplas operações de backup e restore	Atende	Commvault_Monitor_backups.pdf – Seção: Job Management. "Multiple backup and restore jobs can run concurrently across clients and workloads."	https://documentation.commvault.com/11.40/software/features.html
1.16.12	Reinicialização automática de backups interrompidos a partir do ponto de interrupção	Atende	Commvault_Monitor_backups.pdf – Seção: Job Restart. "Backup jobs can be resumed from the point of failure without restarting the entire operation."	https://documentation.commvault.com/11.40/software/features.html
1.16.13	Verificação de gravação correta dos backups durante e após realização	Atende	Commvault_Monitor_backups.pdf – Seção: Data Verification. "The system verifies data integrity during and after backup operations to ensure recoverability."	https://documentation.commvault.com/11.40/software/features.html
1.16.14	Criptografia de dados em trânsito e em repouso	Atende	Commvault_Security_IQ.pdf – Página 7. "Storage with encryption: Commvault encrypts storage by default."	https://documentation.commvault.com/11.40/software/security_iq.html
1.16.15	Base de dados do catálogo com recuperação rápida em caso de desastre	Atende	Commvault_Commcell_recovery.pdf – Seção: CommServe Database. "The CommServe database stores all metadata and supports disaster recovery."	https://documentation.commvault.com/11.40/software/indexing.html
1.16.15.1	Reconstrução total ou parcial do catálogo	Atende	Commvault_Commcell_recovery.pdf – Seção: CommServe Recovery. "The CommServe database can be rebuilt using disaster recovery backups."	https://documentation.commvault.com/11.40/software/indexing.html

1.16.16	Staging: migração de dados entre disco e fita	Atende	Commvault_StorageForBackups.pdf – Seção: Auxiliary Copy. "Data is first written to disk and later copied to secondary storage such as tape using auxiliary copy operations."	https://documentation.commvault.com/11.40/software/storage_policies.html
1.16.17	Restauração para servidor diferente com restore completo e granular	Atende	Commvault_Virtualization.pdf – Página 173. "You can perform a full VM restore and convert the source virtual machine to be used with a different hypervisor."	https://documentation.commvault.com/11.40/software/vmware.html
1.16.18	Replicação de backups para sítios remotos com restauração remota	Atende	Commvault_Virtualization.pdf – Páginas 173-182. "Backup copies can be replicated to remote sites and used for recovery."	https://documentation.commvault.com/11.40/software/vmware.html
1.16.19	Agendamento de jobs sem utilitários externos dos hosts	Atende	Commvault_Monitor_backups.pdf – Seção: Scheduling. "Backup jobs are scheduled using built-in scheduling policies without relying on external tools."	https://documentation.commvault.com/11.40/software/features.html
1.16.20	Multiplexação de backups com múltiplos streams simultâneos	Atende	Commvault_StorageForBackups.pdf – Seção: Multiplexing. "Multiple backup streams can be written simultaneously to optimize throughput."	https://documentation.commvault.com/11.40/software/storage_policies.html
1.16.21	Gerenciamento de snapshots via APIs nativas (criação, retenção, restauração, exclusão)	Atende	Commvault_snapshots.pdf / Commvault_Developer.pdf – Seção: Snapshot Management / REST API. "Snapshots can be managed, created, retained, and restored using native APIs."	https://documentation.commvault.com/11.40/software/snapshots.html
1.16.21.1	Backup via NDMP v4 ou superior (alternativa ao item anterior)	Atende	Commvault_Files.pdf – Seção: NDMP Backup. "NDMP-based backups are supported for NAS environments." Suporte confirmado para Dell EMC Isilon/PowerScale, Dell EMC Unity, Dell EMC VNX/Celerra, NetApp, Hitachi NAS, Huawei, Oracle ZFS Storage.	https://documentation.commvault.com/v11/software/ndmp_agent_system_requirements.html
1.16.22	Catálogo centralizado de gerenciamento de cópias de segurança	Atende	Commvault_Commcell_Configuration.pdf – Seção: Indexing. "Indexing is the process of creating metadata to locate and operate on backed up data."	https://documentation.commvault.com/11.40/software/indexing.html
1.16.22.1	Auto salvamento da configuração e base de dados do catálogo	Atende	Commvault_Commcell_recovery.pdf – Seção: DR Backup. "The system automatically backs up the CommServe database to ensure recoverability."	https://documentation.commvault.com/11.40/software/indexing.html
1.16.22.2	Reconstrução do catálogo a partir de repositórios de fita e disco	Atende	Commvault_Commcell_recovery.pdf – Seção: Restore CommServe. "The CommServe can be rebuilt using disaster recovery backups from disk or tape."	https://documentation.commvault.com/11.40/software/indexing.html
1.16.23	Controle de acesso RBAC independente sem integração com outras ferramentas	Atende	Commvault_Security_IQ.pdf – Páginas 5-6. "Role-based access control is natively supported with configurable user roles and permissions." Conforme Q&A: não extrapolar requisitos.	https://documentation.commvault.com/11.40/software/security_iq.html
1.16.24	Autenticação multifator (MFA) para acessos administrativos	Atende	Commvault_Security_IQ.pdf – Página 6. "Multi-factor authentication: whether multi-factor authentication is enabled in the CommCell environment."	https://documentation.commvault.com/11.40/software/security_iq.html
1.16.25	Integração do controle de acesso com Active Directory ou LDAP	Atende	Commvault_Security_IQ.pdf – Página 6. "Single sign-on providers configured. Integration with Active Directory and LDAP is supported."	https://documentation.commvault.com/11.40/software/security_iq.html
1.16.26	Políticas de expurgo automático de backups obsoletos	Atende	Commvault_StorageForBackups.pdf – Seção: Data Aging. "Backup data is automatically pruned based on configured retention rules."	https://documentation.commvault.com/11.40/software/storage_policies.html
1.16.27	Backup System State do Windows incluindo registry e event logs	Atende	Commvault_Files.pdf – Seção: System State. "System State backups include components such as registry and event logs."	https://documentation.commvault.com/11.40/software/file_systems.html
1.16.28	Backup de objetos do Active Directory com restauração granular	Atende	Commvault_Database.pdf – Seção: AD Object Recovery. "Active Directory objects can be backed up and restored at a granular level."	https://documentation.commvault.com/11.40/software/databases.html
1.16.29	Recuperação de VM com Instant Recovery ou similar	Atende	Commvault_Virtualization.pdf – Página 34. "Live mount operations always use the MediaAgent configured in the virtual machine policy."	https://documentation.commvault.com/11.40/software/vmware.html
1.16.30	Proteção contínua de dados (CDP) para VMs	Atende (equivalência funcional)	Commvault_Virtualization.pdf – Seção: Live Sync / Replication. "Replicate VMs for disaster recovery, with orchestration for failovers and failbacks." / "Live Sync replication and snapshot-based replication." CDP implementado via replicação incremental contínua conforme Q&A: "técnica de backup contínuo onde alterações são registradas automaticamente, reduzindo RPO e evitando janela de backup." Confirmado pelo Senado no Questionamento 2 (26/05/2026).	https://documentation.commvault.com/11.40/software/vmware.html
1.16.31	Descoberta automática de VMs com filtros avançados	Atende	Commvault_Virtualization.pdf – Páginas 51, 81, 153. "When a virtual machine is discovered during backup, a client for the VM is created." / "You can create filters to exclude VMs/instances and disks from backups."	https://documentation.commvault.com/11.40/software/vmware.html

1.16.32	Backup Oracle Database incluindo RAC com integração RMAN	Atende	Commvault_Database.pdf – Seção: Oracle / RMAN. "Oracle backups are integrated using RMAN through the SBT interface." Oracle RAC agent confirmado com agente dedicado: "The Oracle RAC agent provides end-to-end backup and recovery." Versões suportadas: Oracle 11g R2 até 26ai. Suporte a Oracle ExaCS (Cloud@Customer) via RAC pseudoclient.	https://documentation.commvault.com/2024e/commcell-console/oracle_rac.html
1.16.33	Backup e restauração nativa de Kubernetes com descoberta automática	Atende	Commvault_Kubernetes.pdf – Página 2. "Commvault provides granular, application-centric, Kubernetes-native protection." / "Auto-discovery of Kubernetes applications by namespace or label selector." Conforme Q&A: não extrapolar requisitos do edital.	https://documentation.commvault.com/11.40/software/kubernetes.html
1.16.34	Backup e restauração de PV e PVC (Kubernetes)	Atende	Commvault_Kubernetes.pdf – Página 3. "Persistent storage objects (PersistentVolumeClaims, PersistentVolumes) are supported for backup and restore."	https://documentation.commvault.com/11.40/software/kubernetes.html
1.16.35	Backup e restauração granular de objetos Kubernetes	Atende	Commvault_Kubernetes.pdf – Páginas 3, 121. "You can restore full applications, application manifests, or application files." / "Applications such as Secrets, ConfigMaps, Namespaces, StorageClasses."	https://documentation.commvault.com/11.40/software/kubernetes.html
1.16.36	Compatibilidade multi-cloud: AWS, Azure, GCP, Oracle Cloud	Atende	Commvault_Virtualization.pdf / Cloud_Service_Providers.pdf – Página 4. "Supported: Amazon EC2, Azure, Google Cloud, Oracle Cloud Infrastructure."	https://documentation.commvault.com/11.40/software/vmware.html
1.16.36.1	Capacidades de backend não utilizadas para cloud	Atende (regra edital)	Regra interna do edital – restrição contratual, não requer comprovação técnica.	N/A
1.16.37	Backup e restore em fitas para armazenamento off-site	Atende	Commvault_StorageForBackups.pdf – Seção: Tape Storage. "Data can be stored and restored from tape media for offsite storage and recovery." IBM TS4300 confirmado na Tape Storage Matrix oficial.	https://documentation.commvault.com/11.40/software/storage_policies.html
1.16.38	Todas funcionalidades fornecidas por único software	Atende	Commvault_Commcell_Configuration.pdf – Seção: Architecture. "Commvault provides a unified platform for data protection and management across workloads." Conforme Q&A: exigido único software, não extrapolar interpretação.	https://documentation.commvault.com/11.40/software/commvault_overview.html
1.16.39	Sem softwares community / componentes de único fabricante	Atende	Commvault_Commcell_Configuration.pdf – Seção: Architecture. "All components are part of a supported enterprise software platform from a single vendor."	https://documentation.commvault.com/11.40/software/commvault_overview.html
1.16.40	Administração exclusivamente por interface gráfica web	Atende	Commvault_CloudConsole.pdf – Seção: Command Center. "All backup and recovery operations can be performed through the web-based Command Center."	https://documentation.commvault.com/11.40/software/features.html
1.16.41	Instalação nativa em Windows sem ambiente virtualizado	Atende	Commvault_Commcell_Configuration.pdf – Seção: System Requirements. "The CommServe can be installed on supported Windows servers." Conforme Q&A: bare metal obrigatório, sem virtualização, sem WSL, sem ambientes mistos.	https://documentation.commvault.com/11.40/software/features.html
1.16.42	API REST para administração, operação e automação	Atende		https://documentation.commvault.com/v11/software/rest_api_overview.html
1.16.43	Varredura anti-malware durante execução de backups	Atende	Commvault_ThreatScan.pdf – Seção: Threat Scan. "Threat Scan identifies infected files and prevents them from being restored into the environment." Recurso nativo da plataforma (não depende de Trellix).	https://documentation.commvault.com/11.40/software/threat_analysis.html