



HP iTernity Compliant Archive Solution (HP/iCAS)

An open, modular, flexible and expandable long-term archiving solution.

Increasing digitalisation has created new requirements regarding the handling of important business information. This affects the digital archive in particular: a few years ago, it was sufficient to file data; today, legal rules and regulations need to be combined with organisational workflow management. Audit-proof archiving demands extensive data migration, high scalability and avoidance of media breaks. In the process, digital archives must not become company-wide separate data graveyards. This makes seamless integration into existing and future IT infrastructures essential.

The combination of server and storage products from HP and the archiving technology from iTernity (iCAS) provides a future-proof solution. The joint archive infrastructure from HP and iTernity has been developed for the efficient use, administration and structuring of your data, and is based on standardised open system platforms and infrastructures.

No wonder that companies attach high significance to the topic of compliance. Whether tax-relevant information, product documentations, construction data, patient data, correspondence, insurance, financial, or research data are involved: manipulation must be prevented and it must be ensured that audits can be performed at any time.

Audit-proof archiving guarantees management's capability to provide information and the traceability of business transactions required by tax auditors or prosecuting attorneys. Anyone who works negligently risks legal and economic consequences which may also affect the ranking of a company.

The need for an effective storage strategy

Data volumes grow rapidly. Volumes of unstructured data even grow exponentially and are thus a massive cost factor. Commonly, only approximately 10% of data is frequently changed as dynamic content; the remaining data is mainly fixed content. Although never changed, this data stresses your daily data storage and backup, and leads to delays and expensive investments in backup and ILM concepts in case of recovery.

HP and iCAS with patented CSC technology

HP/iCAS offers a highly scalable, hard-disk-based archive infrastructure. With the patented and certified Content Storage Container technology (CSC) the system compresses and encrypts your data using future-proof HMAC-SHA-512-bit hashes. Data can also be optionally compressed and encrypted using AES 256 algorithms.

The CSC technology compiles the archived data and documents with its corresponding index data, creation and retention date (legally required safekeeping period) into a data container. This container can be stored onto any storage medium, yet remains verifiable. In doing so, HP/iCAS compresses your data by up to 50%, enabling better storage utilisation.



Secure for the future through openness and industry standards

During the long-term preservation period of 6, 10, 30 or more years, there will be technological enhancements; storage technologies with increasingly favourable price/performance ratios will appear. For long-term availability, it is not only safeguarding the data that is important but also how the archived data can be migrated to new technologies as easily as possible and at low cost during regular operation. This is why proprietary storage systems are to be avoided and openness/standards are extremely important. HP/iCAS offers these capabilities. The file containers can be moved or copied on a system level from one storage technology to another.

HP/iCAS integrates seamlessly into any type of storage structure within your company. Furthermore, it is based on open industry standards, which guarantee that your data can be migrated into future storage architectures and technologies and that you do not fall into the cost traps of proprietary storage systems. Isolated storage due to proprietary solutions and media breaks will instantly become history.

The high flexibility and openness of the HP/iCAS solution provide the customer with the advantage of using existing or newly acquired hardware more efficiently, and saving costs as hardware, infrastructure, software, and training investments are protected. Existing file servers and SAN systems can be easily expanded with HP/iCAS in order to create the frequently requested "Unified Data Storage".

Small to large

The combinations of HP and iCAS can be scaled for SMB and enterprise businesses. This makes them ideal for new implementations of any scale, for existing or new customers alike, and they can also replace high-maintenance and slow optical jukeboxes. Cluster configurations ensure a high data throughput, availability and security for archive operations.

IT managers also profit from use of the familiar HP storage portfolio: an administrator may e.g. make use of SAN arrays like HP EVA and HP P4000 (LeftHand) or HP P2000 MSA, and StorageWorks products, such as storage and backup platforms. Once capacity limits are reached, SAN storage can be expanded. Maintenance of a separate and isolated storage system is no longer required.

Certified compliant archive solution

Safekeeping periods (retention periods) mandated by law can be managed flexibly with iCAS for each container. Deletion is not possible before the configured period has expired. Once the period has expired, the data can be deleted according to the specifications of the US Department of Defence, i.e. fully destroyed by means of multiple overwrites with changing bit patterns.

The conformity with respective regulations – e.g. Sarbanes-Oxley Act (SOX), EUROSOX, Basel II etc. – is guaranteed: HP/iCAS has been appraised and certified by, among others, the auditing firm KPMG. iCAS exclusively uses certified storage systems in order to ensure smooth operation of your archive. All HP StorageWorks storage products were extensively tested for compatibility with iCAS and successfully certified.

Economical long-term archiving

The overall costs for archive projects are determined above all by two factors: data migration and recurring licence costs for hardware replacement. Regular data migrations to new storage media usually require high personnel overheads and are time consuming. iCAS significantly reduces this overhead, as migration takes place during regular operation on the storage level and without placing a load on the applications. The hardware independence of iCAS enables sustained use of the archive licence. A hardware replacement requires no renewed licensing. In the case of iCAS, only the net-archive volume is licensed, which means that no additional licence costs arise when replacing an outdated data filing system.

The additional deployment of hierarchical storage management solutions (HSM) also enables the transfer of long-term data to low-cost media, e.g. tapes. This is particularly important if the safekeeping procedures dictate that the data also has to be stored separately at a secure location.

iCAS – integration into a wide variety of applications

For the use of ERP, DMS or ECM systems, and in the case of PACS and other systems for document and data administration, seamless integration of the archive solution into each system must be taken into account. iCAS provides an API or a file system interface for this purpose. In the future, iCAS will also support the new XAM standard for the interchange of archive data.

The mutual compatibility between HP/iCAS and numerous renowned ERP, ECM, and PACS systems has been certified in comprehensive tests.

HP/iCAS – highly scalable, multi-subscriber capable

Depending on the requirements, HP/iCAS can be used as a solution with integrated (but expandable) storage, e.g. HP ProLiant storage servers or in combination with externally connected HP disk array systems, and it can be operated directly on the HP X9000, a clustered file system up to 16 PB.

In order to adjust the data throughput to your requirements, the performance of single systems can be increased with standard options such as memory and processors; alternatively, parallel use of multiple HP/iCAS systems is possible: any archive volume starting from a few 100 GB to petabytes can be scaled.

The multi-subscriber capability of HP/iCAS allows departments, parts of companies, subsidiaries and customers to archive separately. Different storage paths can be defined for each subscriber, ensuring spatial separation of the individual data stocks.

High availability with redundancy:

Thanks to its modular design, HP/iCAS can be run redundantly and, depending on the configuration, also with load balancing. This assurance of availability can be achieved through different configurations – including:

- Parallel operation of HP/iCAS servers
- HP/iCAS with Microsoft cluster
- HP/iCAS with storage mirroring
- HP/iCAS with HP EVA and Continuous Access for EVA
- HP/iCAS with HP P4000 Multi-Site High Availability
- HP/iCAS with the Enterprise NAS solution HP X9000

Open for file systems: iFSG

The iFSG (iTernity File System Gateway) is an iCAS component that provides “virtual” drive letters to any application. The iFSG behaves transparently like a normal drive and is therefore available to Windows® commands and applications.

The drive letter created by iFSG can be made accessible to various users on the network using standard operating system functions, e.g. as CIFS share.

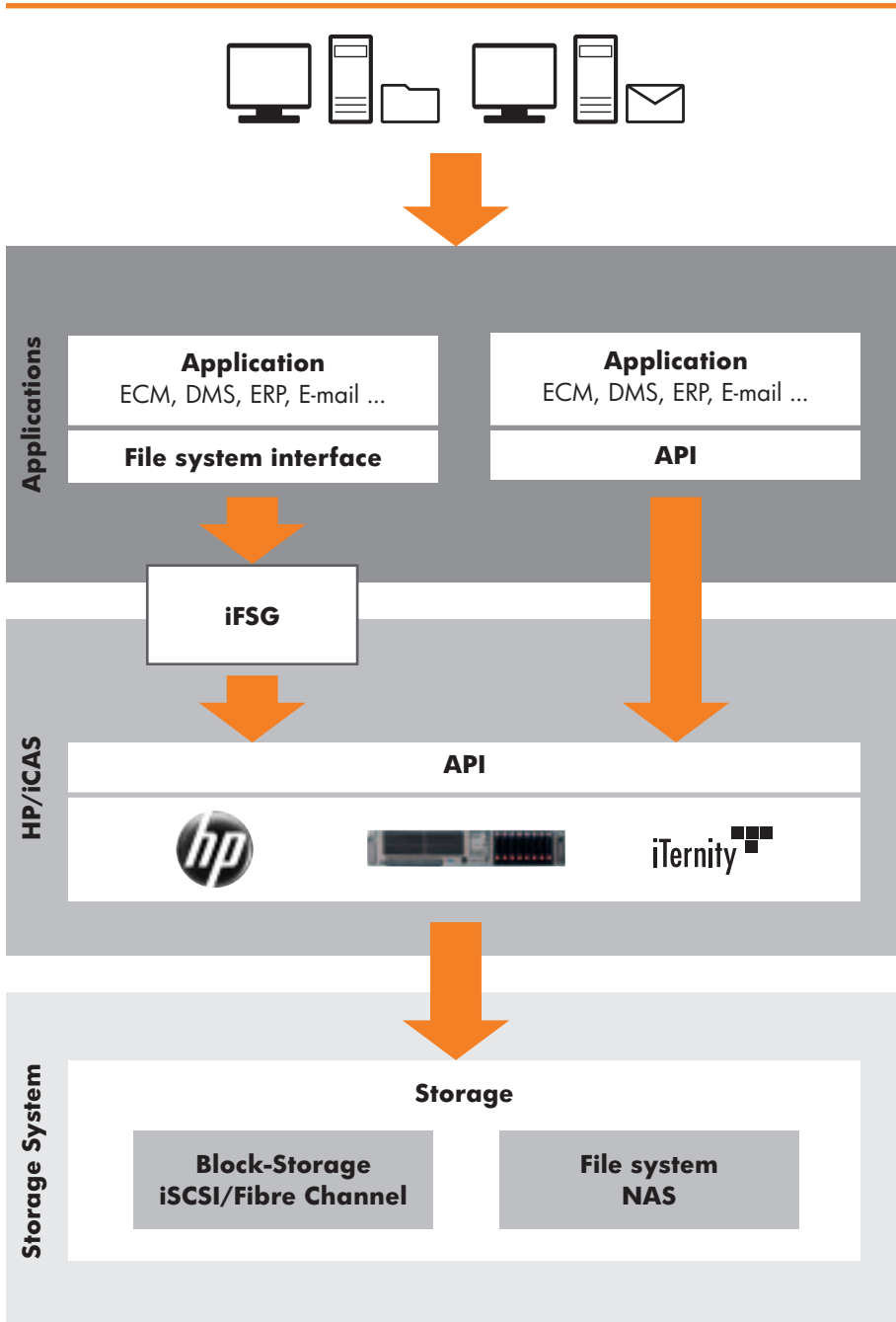
Compliance archive in virtual environments

iCAS can be used to virtualise even complex high-availability archive structures simply, manageably and economically. The deployed hardware is completely separated from the deployed applications (e.g. DMS, ECM, ERP or e-mail archiving) by the virtualisation level created using iCAS.

This additional virtualisation level enables full exploitation of all the known advantages of a hardware-independent architecture. An upgrade of the hardware or also a migration to new hardware systems can be carried out simply during scheduled downtime periods.

The iCAS solution itself can also be virtualised. The virtualisation technologies VMware®, Citrix®, XEN® and Microsoft® Hyper-V™ are fully supported. It goes without saying that SAN virtualisation such as HP SVSP and HP P4000 (LeftHand) can also be included in an archive concept with iCAS.

iCAS thus enables a comprehensive virtualisation of the entire archive infrastructure and offers users the complete range of associated advantages with regard to flexibility and economy.



Basic functions

- WORM via 512-bit hash keys
- Encryption (256-bit)
- Compression
- Secure deletion with 7 overwrites and alternating bit patterns

Flexibility

- Open, modular design, based on standards
- Highly scalable from gigabytes to petabytes
- Flexible: from standalone file servers to consolidated NAS SAN storages
- Simplest extension and integration into existing storage environments
- Migration proof and open for future changes in technology
- Backup optimisation
- Multi-subscriber capability
- Can be completely virtualised

Cost efficiency

- No new backup and recovery processes
- Unbeatable cost advantages for expansions of existing HP storage systems
- Integrated data compression saves up to 50% storage space
- No additional training requirements for hardware and software
- Transparent licensing according to net archive volume
- User-defined replication of archive data without additional licence costs

Security

- Minimal implementation and migration requirements (today and in the future)
- High-availability and redundant configurations (e.g. cluster, storage mirroring)
- Data encryption (AES 256)
- Secure data destruction after expiration of the archiving period is possible (according to specifications of the US Department of Defence)
- Open file system: support of common tools for backup and recovery
- Enables legally compliant archiving
- KPMG-certified solution
- Hardware support from HP Services



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