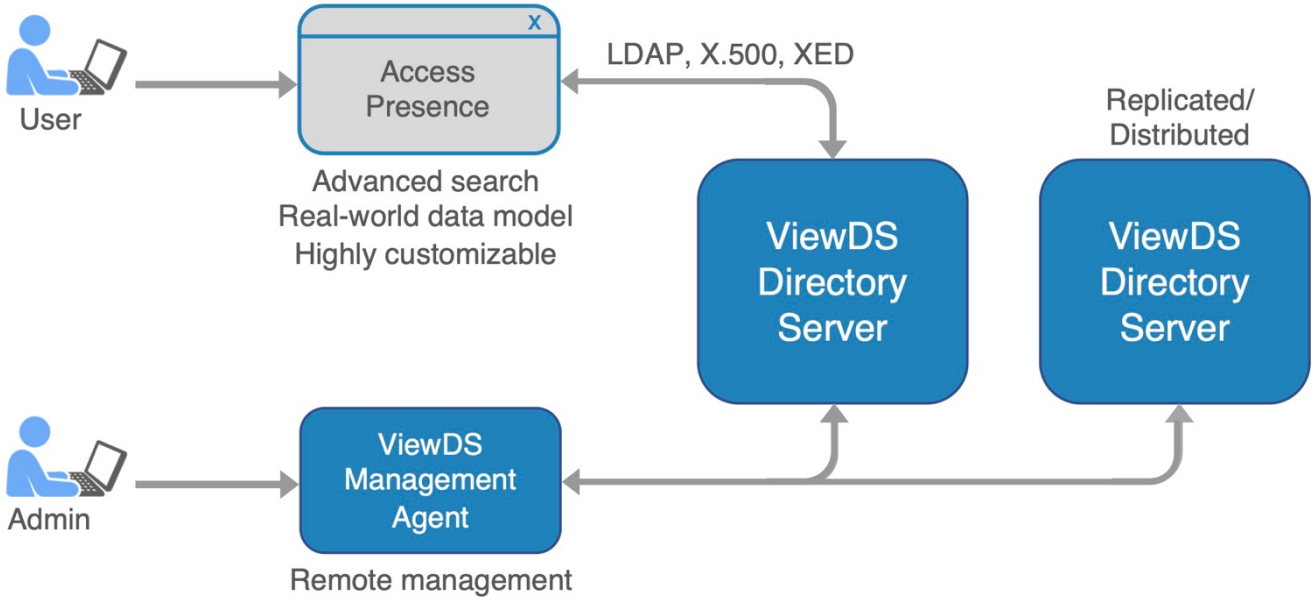
ViewDS Directory

ViewDS Directory meets the rigorous demands of critical infrastructure while delivering an outstanding user experience.

Sourcing a directory that fulfils infrastructure requirements is a significant task in itself, but this is frequently only half the battle. If usability is lacking, or the mechanisms to ensure data integrity are limited, users will lose faith in the directory and eventually stop using it completely.

ViewDS Directory offers fail-over replication, advanced security and flexible management, and is capable of managing millions of entries and processing thousands of queries per second. With its high availability, data integrity and efficient management, ViewDS is a natural choice for critical infrastructure.

On top of that, ViewDS Directory delivers an outstanding user experience. Features such as advanced search, self-service updates, and real-world data representation combine to minimize the learning curve and maximize usability. Consequently, the directory is widely adopted, and its contents trusted by users.



LDAP, X.500, XED support provides flexibility and integration options

ABAC, RBAC, XACML access control for greater flexibility and control

Native XML support to store, index, validate and search XML documents

Rich approximate matching capabilities to enhance the user experience

Instant move and rename of DIT subtrees while preserving referential integrity

Highly adaptable UI with custom tags for directory functionality

Component-wise matching of complex data types (ASN.1 and XML Schema) for querying X.509 certificates, CRLs and related types

viewds identity solutions

Meeting the demands of critical infrastructure

ViewDS Directory provides a solid platform of functionality, significantly reducing the development, testing and support costs associated with a bespoke solution. It also ticks all the boxes for critical infrastructure with standards-based architecture, continuous operation, high levels of scalability, and advanced security.

Standards-based architecture

The ViewDS standards-based architecture ensures seamless communication with third-party directory clients and servers.

- Implements OSI Stack (including RFC1006 over TCP/IP) and X.500 Internet Directly Mapped Protocol (IDMP).
- Supports LDAP, XLDAP, IDMP, XIDMP, SPML, SNMP and HTTP access.

Additionally, ViewDS components communicate using an efficient proprietary protocol over TCP/IP.

Seamless migration

ViewDS Identity Bridge is a light-weight synchronization tool that provides seamless migration when implementing ViewDS Directory. The tool can then be used for ongoing synchronization tasks such as provisioning users and delivering a 'single source of truth' within your organization.

Flexible access controls

Directory offers flexibility by providing role-based and attribute-based access control (RBAC and ABAC). While the RBAC model authorizes users based on their role, ABAC considers multiple factors such as the characteristics of the user, resource, and environment. Generally, the RBAC model is simpler and provides broad protection while ABAC offers fine-grained, dynamic control.

The ViewDS implementation of the ABAC model supports a zero-trust approach to security. It provides the ability to easily express least-privilege access controls at any level of granularity.

Powerful management tools

The *ViewDS Management Agent* is a secure, Windows-based application that runs either locally or remotely to the directory's host. It allows you to manage the status of one or more directories and access their configuration parameters, log files, directory data, schema, and access controls. The application also allows you to set up and manage directory replication and distribution.

Continuous operation

Part or all of a directory can be replicated across multiple ViewDS implementations to provide fail-over (or load balancing, or public access to a specific area of the directory, for example).

Additionally, ViewDS is designed for continuous 24/7 operation and includes a concurrency manager that allows queries to proceed without being locked out by updates. ViewDS Directory also allows routine maintenance tasks, such as backups, without any interruption to service.

Scalability

Many LDAP directories have excellent response times with a small numbers of entries, but their performance suffers when the number of entries increases. ViewDS, however is designed to cope with the demands of a large organization:

- Scalable to tens of millions of entries in a single directory.
- No restriction on the number of entries, depth of the DIT, or number of connected users.
- Bulk uploading tools allow large numbers of entries to be loaded rapidly.

Delivering an outstanding user experience

ViewDS Directory includes a ready-to-go web application, *Access Presence*, with a host of features to minimize the learning curve and maximize user adoption. Your users are more likely to accept and use the technology, improving productivity and reducing the risk of investment.

Bespoke user interface

Access Presence is a highly usable web application that can be fully customised using standard web-development tools.

The application comes with a suite of custom HTML tags that abstract complex directory functionality. There are, for example, tags for organizational charts, self-service portals, reporting interfaces, and certificate management. A web developer can therefore modify Access Presence very rapidly, according to your organization's requirements and branding guidelines, to provide a tailored user interface with a familiar 'look and feel'.

Intuitive and deep search

Access Presence incorporates advanced search features that allow users to find information quickly and easily. ViewDS uses advanced 'approximate matching' that forgives imprecise searches that include, for example, spelling mistakes, typos, acronyms, and abbreviations.

Approximate matching ensures that a search on:

- 'fiziotherapy' would phonetically match 'physiotherapy'
- 'directer or 'directro' would be corrected to match 'director'
- 'optics' would match words with the same stem such as 'optical'
- 'cancer' would synonym match to 'oncology'
- 'NSW' would acronym match to 'New South Wales'

Additionally, thanks to *native XML support*, ViewDS allows users to search XML documents. To illustrate, consider a HR department that stores employees' resumes as XML documents. *Native XML support* means that users can search on a specific area of the resumes – they might, for example, search on the 'Qualifications' element of the XML to find all qualified project managers.

Without this feature, an application developer would generally need to either scan an entire directory or filter search results to find the required data. Both options are inefficient and slow.

Additionally, any XML schema can be uploaded at runtime to facilitate validation and semantically meaningful searches of associated XML documents.

Real-world representation

ViewDS presents directory entries in a *directory information tree* (DIT) to mirror the organization's real-world hierarchy. Users are presented with a tangible and familiar data model, enabling them to browse for contact details by location, division, unit, cost centre or role, for example.

Instant move and rename

An issue to consider with real-world hierarchies is that they are inherently volatile as organizations change continually. Directory administrators often respond to this volatility by simply flattening the DIT to avoid the complexity of keeping abreast of change. In doing so, however, the directory becomes little more than a list.

ViewDS Directory overcomes this issue by providing instant 'move and rename' functionality. Referential integrity is maintained as all links and relationships (for example, 'managed by' and 'manager of' relationships) are preserved.

The directory therefore supports large-scale changes to the DIT that would otherwise require significant planning and resources. This has proven invaluable to users managing 'Machinery of Government' changes that involve many large departments and interconnecting relationships.

Distributed data maintenance

The real-world hierarchy also enables a distributed approach to data maintenance. For example, one person within each department can be granted access to maintain entries in their area of the DIT. Additionally, every user can be granted self-service access to modify their own directory entry.

These approaches decentralize responsibility for updates and avoid administrative bottlenecks. Data maintenance also becomes highly responsive as it's in the hands of the people best placed to react to change. The result is that users trust the information presented to them and continue to use the directory, protecting the investment and delivering ROI.

Certificate management

ViewDS Directory provides comprehensive support for managing PKI certificates.

A valuable feature of ViewDS is its ability to perform component-wise matching on complex data types. Certificates can therefore be searched on their individual components, such as expiry times, sequence numbers, public keys, or issuer names, for example.

This functionality, along with PKI matching rules, ensures that certificates and certificate revocation lists (CRL) can be managed and processed rapidly and reliably.

Summary

In summary, ViewDS Directory is a highly robust solution that delivers the security, flexibility and efficiency required by critical infrastructure, along with an excellent user experience.

Efficiency…

- Instantaneous, large-scale changes to the DIT to maintain the data model
- Rich approximate matching improves the user experience significantly
- Native XML support allows XML documents to be stored, indexed, validated, and searched

Flexibility…

- LDAP, X.500 and XED delivers more integration options
- Option to mix and match RBAC and ABAC offers greater control, and the implementation of ABAC provides the ability to apply a zero-trust approach
- Highly adaptable user interface through standard web tools and techniques

Risk mitigation…

- Exceptional user experience improves user adoption and retention
- Designed and developed by a proven software innovator
- Flexible procurement options