



VIEWDS

IDENTITY MANAGEMENT AND XML
DIRECTORY SERVICES SOLUTIONS

RELEASE NOTES VIEWDS VERSION 7.0

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Release Notes

For ViewDS Version 7.0

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Significant changes in ViewDS 7.0

This document provides an overview of the significant changes in ViewDS Version 7.0. The changes are divided into six categories:

- ViewDS tools
- Configuring ViewDS
- Defining schema
- Indexes, extensions and word lists
- Configuring the DSA for the Web DUA
- Managing security

ViewDS tools

ViewDS Management Agent

The ViewDS Management Agent is a Windows-based application that makes managing Directory System Agents (DSAs) simpler and more efficient.

The Management Agent is usually installed on a different computer to the one hosting the DSA and requires a new component – the *Remote Administration Service (RAS)* – to be installed on the DSA's host. The RAS allows the DSA to be managed remotely.

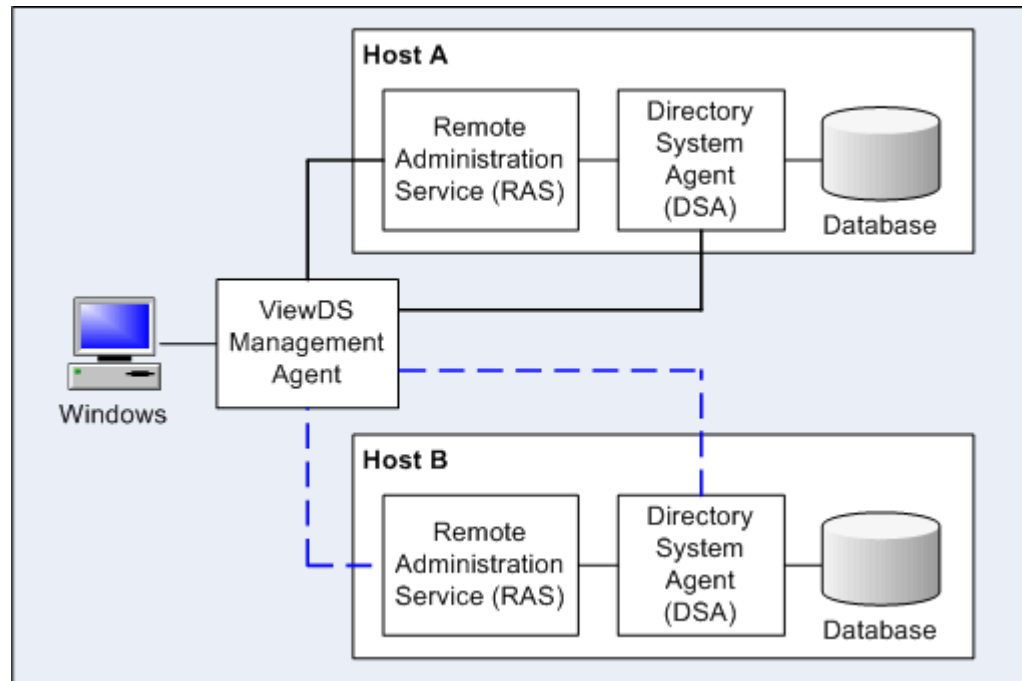


Figure 1: ViewDS Management Agent

To ensure secure administration, SSL/TLS connections and certificate-based authentication are used between the ViewDS Management Agent and DSA, and between the ViewDS Management Agent and RAS.

For more information about this certificate-based authentication, see the *Security* chapter in the *ViewDS Technical Reference Guide: Directory System Agent*. For information about using the ViewDS Management Agent, see the *ViewDS Installation and Operations Guide* and *ViewDS Management Agent help*.

Remote Administration Service

The RAS is installed when you install the DSA. It allows the DSA to be started, stopped and configured remotely through the ViewDS Management Agent.

Although it is rarely necessary, the RAS can be controlled from the command line. For further details, see the *ViewDS tools* chapter in the *ViewDS Technical Reference Guide: Directory System Agent*.

Stream DUA

The following changes have been made to the Stream DUA:

- The `-g` option has been removed (it was previously maintained for compatibility with earlier versions).
- The `-d` option no longer disables schema checking.
- The `dump` command no longer generates the files `dib.synonyms` and `dib.words`. The synonyms, noise words and truncated words are now stored in a subschema subentry and are consequently dumped to `dib.*` files with the rest of the directory data.

ViewDS Windows DUA

ViewDS Version 7.0 does not include the Windows DUA previously provided with View500 Version 6.

Administration DUA

ViewDS Version 7.0 does not include the web-based Administration DUA, which has been superseded by the ViewDS Management Agent described above.

Documentation set

The *View500 Administration Guide* has been updated and divided into the three separate documents described below. Additionally, the ViewDS Management Agent comes with context-sensitive help.

Installation and Operations Guide

This guide includes instructions for installing and configuring ViewDS, and for day-to-day operational tasks. It also includes an introduction to using the ViewDS Management Agent, an overview of ViewDS concepts, and how to approach adapting ViewDS according to your requirements.

Technical Reference Guide: Directory System Agent

This guide provides a technical reference for the DSA, and includes information about configuration parameters and functionality. The functionality can be implemented using either the Stream DUA or ViewDS Management Agent. The Stream DUA, however, allows you to implement functionality beyond the scope of the Management Agent.

Technical Reference Guide: User Interfaces

This document is a technical reference for the Web DUA and Printing DUA. It is currently unavailable. However, the View500 documentation for these topics is still relevant and available if required.

Configuring ViewDS

For more information about the topics in this subsection, see the *Configuring ViewDS* chapter in the *Technical Reference Guide: Directory System Agent*.

Configuration-file parameters

A number of new parameters have been added to the configuration file; and another set of parameters is now obsolete. The new and obsolete parameters are listed below.

New parameters

The new parameters are:

- dsatrusted
- rascertificate
- rasprivkey
- rasprivpass
- rastrusted
- dsaccontrol
- snmpcontrol
- rasaddress
- httpsaddress
- certificatelookup
- truncateresults

Obsolete parameters

Most of these parameters relate to obsolete components, including the Communications Server and Administration DUA.

The obsolete parameters are:

- admdir
- cfg
- clogdir
- schemadir
- sumtabdir
- commsrvaddress
- ldapsrvaddress
- sldapsrvaddress
- commsrvprivate
- duasrvprivate
- commsrvlocal
- ldapprivate

Communications configuration

ViewDS Version 7.0 includes support for XLDAP over SOAP using HTTPS. It also includes support for IP version 6:

- LWS using TCP/IP version 6
- LDAP address using TCP/IP version 6
- SLDAP address using IPv6
- IDM address using IPv6
- XIDM address using IPv6
- XLDAP address over TCP/IP version 6
- XLDAP address over SOAP using HTTP (TCP/IP version 6)

Defining schema

For more information about the topics in this subsection, see the *Defining Schema* chapter in the *Technical Reference Guide: Directory System Agent*.

Parsing rules for attributeSyntax

Parsing rules allow constraints to be declared for attributes. They are declared in the `attributeSyntax` component of the `attributesTypes` operational attribute.

For example, the `attributeSyntax` component allows:

- integer types to have named number lists, with the names appearing in the LDAP-specific encoding. For example: `INTEGER {xf (0), caas (1), other (2)}`
- enumerated types to have names appear in the LDAP-specific encoding.
- value constraints on string, integer and enumerated types. For example:
`INTEGER (0..5 | 9..MAX)`
`IA5String ("captain" | "major" | "colonel")`
- size constraints to be declared for string types. For example:
`PrintableString (SIZE (3..8))`
`PrintableString (SIZE (1..MAX))`
`OCTET STRING (SIZE (0..5 | 9..MAX))`

Time and date attributes

The DSA dynamically generates values for several time and date operational attributes, including `currentDateTime` and `currentDayOfWeek`. They are of particular use when defining time-based refinements in access controls.

Indexes, extensions and word lists

For more information about the topics in this subsection, see the *Indexes, extensions and word lists* chapter in the *Technical Reference Guide: Directory System Agent*.

Indexing and extensions

The operational attributes for indexing and extensions are now stored in the newly defined *subschema configuration subentry*. As such, the operational attributes apply to all entries in the same *information plane*.

An information plane comprises either master data or shadow data. Master data comprises entries that are not supplied by another DSA through replication; and shadow data comprises entries that are supplied by another DSA through replication.

If an information plane has multiple subschema areas, then the indexing and extensions are cumulative.

Indexing and extensions can be maintained through the ViewDS Management Agent.

Word lists

The operational attributes for word lists – synonyms, noise words and truncated words – are now stored in a subschema subentry. As with indexing and extensions described above, these operational attributes apply to all entries in the same information plane and are cumulative.

Word lists can be maintained through the ViewDS Management Agent, and can be replicated to a shadow DSA.

Component matching rules

The ViewDS component-matching rules allow users to search specific parts of an attribute with a complex syntax – for example, digital certificates, XML documents and certificate-revocation lists.

To illustrate, consider a Human Resources department that stores employees' resumes as XML documents. Component matching would allow a specific area of the resumes to be searched individually, and therefore, efficiently. For example, a user might search on just the 'qualifications' component of the resumes to find employees with a qualification in nuclear physics.

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

Phonetic matching of Mandarin Chinese

ViewDS provides phonetic matching for Mandarin using *Hanyu Pinyin*, a system for representing the pronunciation of Mandarin Chinese through a set of phonetic codes. Each phonetic code is expressed as a word in the Roman (Latin) alphabet.

A number of Chinese characters can have the same phonetic code, and are treated as synonyms by this approximate-match mechanism. The mechanism also recognises the phonetic code and matches it to the Chinese characters with the associated pronunciation.

Keyword synonyms

The mechanism for approximate matching of keyword synonyms has been improved.

A set of keyword synonyms comprises phrases of one or more words that are treated as equivalent when a user requests an approximate match on one of them. For example, a set of synonyms might comprise 'high school' and 'secondary college'.

With ViewDS, each phrase is now treated as equivalent even when it appears within a longer phrase. To illustrate with the above synonyms, a search on 'Stevenville high school' would return 'Stevenville secondary college'; and, similarly, a search on 'high school' would also return 'Stevenville secondary college'.

X.400 indexes and matching rules

ViewDS supports indexes and matching rules for X.400 (1994) attributes.

Configuring the DSA for the Web DUA

The `searchOptions` operational attribute includes the type `AttField`, which has been extended in this release. It now allows components of complex syntaxes to be identified as separate fields so that Web DUA users can search on them individually.

For further information, see the *Configuring for the Web DUA* chapter in the *Technical Reference Guide: Directory System Agent*.

Managing security

Strong authentication

With View500, strong authentication was available if the DSA had a `cACertificate` attribute in its root entry. This is still the case with ViewDS. However, strong authentication is now also available through a second mechanism, explicit trust.

With explicit trust, the DSA performs a comparison against a set of trusted certificates in its 'trust stores'. There are two trust stores:

- the DSA's trusted directory (identified by the new configuration-file parameter `dsatrusted`) – this is used for strong authentication between the DSA and RAS, and between users of the ViewDS Management Agent and the DSA and RAS. The privileges assigned to a DUA authenticated in this way are equivalent to the super-administrator privileges only previously available using the deity-file password.
- the `certificate` field in `dsaCollaborators` – this is used for strong authentication between DSAs.

Role-based access controls

ViewDS extends the functionality of X.500 Basic Access Control to provide role-based access control which significantly improves the efficiency of managing security.

The DSA can now assign an access control dynamically according to whether a user matches the criteria defined in a search filter. For example, an access control might allocate privileges to a user provided they are a 'manager'. Therefore, when a user is promoted to the role of manager, it is only their directory entry that needs to be updated, and not the access control.

Time-based access controls

Access controls that are time dependent can now be defined. For example, a user might only be granted access between specific hours or on specific days, or both (see *Time and date attributes* on page 4).