



VISULOX 4

VISULOX4_ReleaseNotes

28.01.2026

amitego



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1 Preface

The **VISULOX Release Notes** provide information about the new features and changes for this version of VISULOX. This document is intended for system administrators.

1.1 How this manual is organized

Preface
Release Notes / Features
Support Lifecycle
Known Issues
Glossary

1.2 Legend

 Useful information
 Recommended setting
 Warning / use with caution
 Tipps & tricks

1.3 VISULOX documentation

Application	Title	Format
Release Notes	<i>VISULOX Release Notes</i> <i>Platform Support and Release Notes</i>	HTML
Installation	<i>VISULOX Installation Guide</i> <i>Installation Guide</i>	HTML
Administration	<i>VISULOX Admin Guide</i> <i>Administration Guide</i>	HTML
User	<i>VISULOX User Guide</i> <i>User Guide</i>	HTML

 The VISULOX Online Documentation is available at: <https://portal.visulox.com/wiki>

1.4 Documentation feedback

Submit comments about this document by sending a mail to: support@visulox.com

2 Support Lifecycle

2.1 Support Lifecycle

The current VISULOX release version is **VISULOX 4.3.1**.

All supported VISULOX versions can be found in [Features and Changes](#).
Hotfixes are provided for these supported versions.

Security vulnerabilities and fixes can be found here: [Security Vulnerabilities](#).

New features will be implemented only in the latest release.

New features for previous versions may be implemented only on request and if technically reasonable.

Release Version	Release Date	Hotfix Support Ends
VISULOX 4.3.x	May 2025	May 2027
VISULOX 4.2.x	November 2024	November 2026
VISULOX 4.1.x	July 2024	July 2026
VISULOX 4.0.x	Dec 2023	Dec 2025
VISULOX 3.6.x	March 2023	March 2025
VISULOX 3.5.x	Oct 2022	Oct 2024
VISULOX 3.4.x	March 2022	March 2024

Release Version	Release Date	Hotfix Support Ends
VISULOX 3.3.x	June 2021	June 2024

 Existing Support & Maintenance contracts for installations running out of support remain unaffected.

3 Appendix_R

3.1 Appendix

3.1.1 Glossary

Expression	Description
3PA	Third Party Authentication / 3rd Party Authentication
Access Branding	With Access Branding it is possible to display different login page designs for different users according to their access point.
Access Management	Enhanced VISULOX Concept for administrating the access of users
AD	A ctive D irectory
AIP	A daptive I nternet P rotocol: Client communication protocol from the VISULOX PORTAL Service
Ambiguous login	The situation where an authentication mechanism has found more than one match for a user and cannot distinguish between them without further information from the user
Annotation	A short text, that can be entered before a recorded session is confirmed, during a recorded session or in VISULOX Cockpit / Archive for closed sessions
API	A pplication P rogramming I nterface

Application server	A server which provides applications, that can be accessed via the VISULOX PORTAL
Application session	See: emulator session
Args	The arguments an application is started with
Assist / Assistance	See: Assisting Cooperation
Assisting cooperation	Within the VISULOX Cockpit, the user can select an application and press assist to join the application. The owner of the application selects the cooperation mode
Chapter	A chapter equals 20 minutes film of a recorded session
CLI	Command Line Interface
CMD	The command / path an application is started with
Cooperation	When two or more users are watching or working with the same application in realtime on their own desktop
Cooperation master	The user, who has started the application (owner) will be the master of this application in a Cooperation
Cooperation member	A user, who is not owner of an application and who is not able to switch the cooperation modes
Cooperation modes	<p>On hold: Member is assigned to a Cooperation, but does not participate</p> <p>Observe: Member is able to watch the Cooperation application, but can not interact</p> <p>Interact: Member can interact with the application</p>

CP	Short form for Cooperation
Datastore	Internal VISULOX PORTAL Service database, where all defined objects (users, hosts, applications) are stored. A VISULOX PORTAL Array replicates the datastore between all members simultaneously
DMZ	Demilitarized zone (Perimeter zone)
DSI	Directory Service Integration
Dual Control	Cooperation enforcing a real four-eye-principle
ELU	Extended License Usage - When ELU has expired, its not possible to start more recorders or display more users than allowed under MD / Status, max users / recorders
Emulator session	The running session, when an application is started with the Workspace on an application server
Expect script	VISULOX PORTAL connection script started during the launch of an application
External DNS name	The name by which an VISULOX PORTAL Server is known to a client device. A VISULOX PORTAL Server can have multiple external DNS names.
File Exchange	File Transfer web access for transferring files between a client and the Transit Zone for users without access to the VISULOX PORTAL
File Transfer Client	VISULOX Component for transferring files securely from Transit Zone to application servers and back
Film	Summary of the recorded chapters

Forced authentication	When VISULOX PORTAL prompts for a user name or password, by displaying an authentication dialog box For example, if a user holds down the Shift key when clicking on an application's link on the Workspace
FQDN	Fully Qualified Domain Name - The full name of a system, containing its hostname and its domain name. For example: portal.visulox.com, where portal is the hostname of a server, and visulox.com is the domain name
Group Access	Group Access is used to define an Access Policy for a specific list of users. This is needed when users are working together in a project and the project is represented by a group object in the repository
Host object	Host objects can be assigned to File Transit, Command Guard and Command Connect groups.
Host Connect	See: VISULOX Command Connect / VISULOX Command Guard
IAR	Intelligent Array Routing
ICA	Independent Computing Architecture : Client communication protocol from Citrix
Integrity-Check	Tool to check the VISULOX components and services
Internal / external message	The VISULOX Service supplies an external message for the login page and an internal message for the user's Workspace
Kiosk mode	VISULOX PORTAL display mode, where an application is displayed in full-screen
LDAP	Lightweight Directory Access Protocol
LDAPS	Lightweight Directory Access Protocol over SSL . Used for secure connections to an LDAP directory.

LID	Short form for License ID - Contains the date, the license started
Management Console	See: VISULOX Cockpit
MFA	Multi Factor Authentication
Native Client	A VISULOX PORTAL component that can be installed on client devices. The client maintains communication with the VISULOX PORTAL Server and is required to run applications The Native Client is provided by Oracle.
NEP	Short form for Network Entry Point
Network Entry Point	See: RIP
NFS	Network File System
Notifications	Implemented notification system for access, Workspace / File Transfer and emulator sessions in the VISULOX Services
Object	A self-contained entity, defined by a number of attributes and values. VISULOX PORTAL Objects have different types, such as an X application. The available attributes for each type are defined by a schema
One Time Passcode	The One Time Passcode is used for authentication and will become invalid after usage. A provided OTP is based on a secret key and the time via a smartphone APP
Organization object	A VISULOX PORTAL Object used to represent the top level of an organizational hierarchy. Organization objects can contain OU= or user profile objects. Organization objects have an O= naming attribute.

Organizational hierarchy	The collection of objects in the VISULOX PORTAL Datastore, descending from one or more organization or domain component objects. Represents the collection of people, application servers, and applications within an organization.
Organizational unit object	A VISULOX PORTAL Object used to distinguish different departments, sites, or teams in an organizational hierarchy. Organizational unit (OU) objects can be contained in an organization or domain component object. Organizational unit objects have an OU= naming attribute
OTP	Short form for One Time Passcode
Peer DNS name	The name by which an VISULOX PORTAL Server is known to other VISULOX PORTAL Servers in the same array
Primary server	The VISULOX PORTAL Server that acts as the authoritative source for global information, and maintains the definitive copy of the VISULOX PORTAL Datastore
RDP	Remote Desktop Protocol : Client communication protocol from Microsoft
Remote IP	Remote IP address, the information, from where a client request is coming
Report	The VISULOX Service is collecting data about workspacesessions, emulatorsessions, recordings and cooperations. The information can be clearly arranged in reports. In VISULOX Cockpit a variety of possible reports can be created on several pages
Resume	To redisplay an application session that has been suspended. See also: suspend
RIP	Short form for Remote IP address
RVA	Remote Vendor Access

S & M	Short form for S upport and M aintenance
Secondary server	An array member that is not the primary server. The primary server replicates information to secondary servers.
Session	The VISULOX PORTAL generates a session for any X11 or RDP application, which has an unique session ID
SIEM	S ecurity I nformation and E vent M anagement
SOX	Short form for S arbanes- O xley A ct
SSL certificate	A digital passport that establishes credentials on the web. In VISULOX PORTAL Service, allows client devices to trust the identity of a VISULOX PORTAL Server
Suspend	To pause an application session. A suspended application is not closed, it can be resumed. See also: resume
TAP	Short form for T emporary A ccess P IN, part of the Multi Factor Authentication (MFA)
TCC	Short form for T arantella C lient C omponent: Component for login into the VISULOX PORTAL via Native Client
TCL	Programming Language. Most of the VISULOX products are based on TCL
Temporary Access PIN	VISULOX method for the Multi Factor Authentication (MFA)
TFN	Tarantella Full Naming, X.500 format to address a VISULOX PORTAL object
Transit Zone	Zone, where files are transferred from/to application servers/clients

VAP	Short form for V irtual A ccess P oint
Virtual Access Point	VISULOX method to get an independent URL of the VISULOX Access Nodes for reliability and Workspace balancing
VISULOX Access Node	Node running the VISULOX PORTAL Service and the VISULOX Service
VISULOX Base	Single VISULOX Node
VISULOX Cluster	Two or more VISULOX Nodes, that are joined together because of scalability, redundancy and load balancing
VISULOX Cockpit	Central VISULOX application to control sessions, access, recording, cooperations and to generate reports
VISULOX Command Connect	VISULOX component, which provides the possibility to connect to multiple hosts and to open an X-Client on these hosts. The connection method can be SSH, RDP or telnet. Former: Host Connect
VISULOX Command Guard	VISULOX component, which provides the possibility to connect to multiple hosts and to open an X-Client on these hosts Command Guard has command level controls for the application. It allows and denies the usage of certain commands by the user Additionally server side scripts can be issued either to multiple endpoints or to a single one
VISULOX Common Access Platform	The whole environment, that is built with the VISULOX GATEWAY, VISULOX Portal Service, VISULOX Service and databases
VISULOX Data	VISULOX Database and VISULOX Filestore

VISULOX Filestore	File system which stores the films. 5 MByte per user and per hour. Recommended for VISULOX is a local disk with 150-250 GB, for VISULOX Archive Node depending on the lifetime of films, up to x TB on a NAS/SAN storage
VISULOX GATEWAY	The VISULOX GATEWAY is a proxy server designed to be deployed in front of a VISULOX PORTAL Array in a demilitarized zone (DMZ). This enables the VISULOX PORTAL Array to be located on the internal network of an organization. Additionally, all connections can be authenticated in the DMZ before any connections are made to the VISULOX PORTAL servers in the array. The VISULOX GATEWAY manages load balancing of HTTP connections for the VISULOX PORTAL Servers in the array.
VISULOX Host Connect	See: VISULOX Command Connect
VISULOX Hotfix	Tool to check the software status in the cluster, backup and apply hotfixes
VISULOX keystroke recording with analyzing engine	In this recording mode all user keyboard interactions are registered and can be checked for unwanted entries (analyzing engine)
VISULOX Node	Node running the VISULOX Service to control sessions, films and recorders
VISULOX PAM	VISULOX Privileged Access Management
VISULOX PORTAL Array	Two or more VISULOX Access Nodes, that are joined together because of scalability, redundancy and load balancing
VISULOX PORTAL Benchmark	Tool to create a defined number of demo-users, who log into the VISULOX PORTAL and start recorded applications automatically. All settings can be configured easily within a GUI
VISULOX PORTAL Console	Web-based management console for the VISULOX PORTAL Service (Former: Administration Console)

VISULOX PORTAL Web Server	A pre-built web server installed and configured along with the VISULOX PORTAL Service, contains Apache, mod_ssl for HTTPS support, and Tomcat for Java Servlet and JSP support
VISULOX PORTAL Web Services	An API collection that allows developers to build their own applications to work with the VISULOX PORTAL Service. The APIs can be used to authenticate users, launch applications, and interact with the VISULOX PORTAL Datastore
VISULOX Revision Server	VISULOX Node which replicates the production database into Revision Server database and transfers the films from the production filestore into the Revision Server filestore (also known as Archive Server)
VISULOX Service Group	See: VISULOX Cluster
VISULOX Short Support Report	A Short Support Report to send via eMail created with visulox support -info . The Short Support Report should be sent to the VISULOX Support Team every time a new Support Request is opened
VISULOX Support Report	Package generated by the visulox support command, containing all information, necessary for support
VISULOX Transit Area	File Transfer component embedded in the Workspace to transfer files between client and Transit Zone
VISULOX Transit Mapping	To setup the VISULOX Transit Zone on Unix application servers, that are not a VISULOX Node, an RPM file is available for installation.
VISULOX Videolog Player	Player to view the recorded films inside the VISULOX Cockpit or checked out films in a browser
VISULOX Webservice User	Each VISULOX Service needs this user in the datastore to read the webservices on the VISULOX Access Nodes. The VISULOX webservice user has to be setup once in the datastore
VISULOX_Setup.xls	Excel-sheet, which has to be filled out in the planning phase by the responsible project leader, together with the amitego consultant

vlxMode	VISULOX variable set in the VISULOX PORTAL Console
VLX Password SelfService	Active Directory (AD) and Oracle Unified Directory (OUD) users are able to change their password by themselves with this application assigned.
Webtop	In the current version, the Webtop is called the Workspace . A Workspace is the term used to describe a user's applications, documents, and desktops. See: Workspace
WM	Short form for Window Manager
Workspace	The Workspace is displayed after logging into the VISULOX PORTAL. It is a special web page, that lists the applications that are assigned to the user
Workspace balancing	VISULOX load balancing mechanism including a virtual access point
Workspace session	The running session, after a user has logged into the VISULOX PORTAL via browser or Native Client
X11 forwarding	The process of forwarding, or tunneling, the windows of a remotely started X application to a client desktop
X Window System	A distributed window system for UNIX platform operating systems, based on the X11 protocol. Also called X11, or X Windows
X.509 certificate	See: SSL certificate

4 New Features and Changes

VISULOX Release 4.3.2 (January 2026)

- SEC: Apache updated to version 2.4.66
- SEC: Tomcat updated to version 9.0.112
- SEC: Added missing HTTP Headers (VSLX-146)
- REDACT feature for Command Connect output (VSLX-101)
- ENH: SSH-Agent implemented into Command Connect and File Transfer client (VSLX-142)
- ENH: Command Connect / FT Client host URIs for CyberArk (VSLX-143)
- ENH: Enforced Workspace disconnect (applications suspended) after a configured time (VSLX-159)
- ENH: Enforced application session disconnect after a configured time (VSLX-159)
- ENH: Mod evasiv for gateway (VSLX-190)
- ENH: Display of upload/download size in Transit Zone (VSLX-170)
- ENH: Changed password view on hover to on click (VSLX-183)
- FIX: SCX Validation Info (VSLX-128)
- FIX: Updated Hyperscan packages for Red Hat 9 / Oracle Linux 9 (VSLX-171)
- FIX: Updated mesa packages for Red Hat 9 / Oracle Linux 9 (VSLX-172)
- FIX: vlxjwm.tcl: JWM warning: bad color (VSLX-190)
- FIX: New updated React-dom library version 19.2.0 (VS-1928)
- All enhancements and fixes of previous released hotfixes are included.

ENH = Enhancement, FIX = Fixed, SEC= Security CVE = Common Vulnerabilities and Exposures

VS = VISULOX Support Ticket, VD = VISULOX Development Task, VSLX = New VISULOX Development Task

VISULOX Release 4.3.1 (August 2025)

- SEC: Apache updated to version 2.4.64
- SEC: Tomcat updated to version 9.0.107
- FIX: Integrity X11 Check only on VISULOX Portal Servers (VSLX-110)
- All enhancements and fixes of previous released hotfixes are included.

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VISULOX Release 4.3.0 (May 2025)

- SEC: Apache updated to version 2.4.63
- SEC: Tomcat updated to version 9.0.104
- ENH: Entra/3rdParty integration (VSLX-7)
- ENH: Improved landing page configuration (VSLX-39)
- ENH: Transit file hash displayed in event stream (VSLX-34)
- ENH: Added VISULOX accesspoint edit color (VSLX-47)
- ENH: Added VISULOX accesspoint logo (VSLX-50)
- ENH: Printing on Oracle Linux 9 (VD-2429)
- ENH: Added SELinux context to /opt/visulox/var/log (VD-2490)
- ENH: Added the application description to VISULOX Cockpit (VD-2501)
- ENH: Send access request info about approved access to all available approvers (VD-2505)
- FIX: Session transfer (VSLX-46)
- FIX: MFAToken WAIT status disappears from Cockpit session view (VSLX-55)
- FIX: ttagw not among existing services (VSLX-61)
- FIX: Cockpit Archive database timeout (VSLX-63)
- FIX: Mailinggroups with direct user assignment (VSLX-64)
- FIX: VISULOX Portal Service - PID Files - Permissions (VSLX-67)

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VISULOX Release 4.2.0 (November 2024)

- SEC: Tomcat updated to version 9.0.90
- SEC: JK Connector updated to version 1.2.50



- ENH: New end2end / VLX Monitoring (VD-2022)
- ENH: Microsoft Entra authentication supported (VD-2425)
- ENH: Printing on OL9 supported (VD-2429)
- ENH: Authentication for local users via PAM (VD-2430)
- ENH: Variable %%TTA_UserSecurityEquivalent%% replaces the user for freerdp (VD-2464)
- FIX: Updated versions of several Javascript files (VD-2188)
- FIX: Window Management with VISULOX Cockpit on MAC (VD-2254)
- FIX: Accesspoint expected boolean value (VD-2474)
- FIX: x11forwarding tunnel not used (VD-2481)
- FIX: Sessioncache permissions (VD-2483)

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VISULOX Release 4.1.1 (August 2024)

- SEC: Apache updated to version 2.4.62
- SEC: Redesign session token (VD-2416)
- SEC: Session fixation (VD-2417)
- FIX: Special chars in Distinguished Name (VD-2431)

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VISULOX Release 4.1.0 (July 2024)

- SEC: Apache updated to version 2.4.61
- SEC: Tomcat updated to version 9.0.88
- ENH: Updated mobile view capabilities
- ENH: New design for File Exchange
- ENH: Client certificates
- ENH: Revised 3rd party authentication

- ENH: Asynchronous OCR implemented - not for existing films (VD-2331)
- ENH: Improved HTML5 Client performance with enhanced Graphics enabled (VD-1730)
- ENH: Availability probing maintenance mode for VISULOX Gateways (VD-1879)
- ENH: More OTP configuration events (VD-2080)
- ENH: Unified log formats (VD-2172)
- ENH: More options for Command Connect (Arrange/Iconify (fix)on/off) (VD-2242)
- ENH: Improved cache handling for Apache header (VD-2267)
- ENH: Checkout link for approver (VD-2306)
- ENH: Control consent and captcha based on the accesspoint (VD-2320)
- ENH: Command Connect/Guard option to configure the terminal (VD-2328)
- FIX: Discard editing or deleting admin elements (VD-1656)
- FIX: Latest versions of several Javascript files (VD-1730)
- FIX: %USER% variable for alternate File Transfer users (VD-2256)
- FIX: VNC-Viewer (lastest version) works with -resource and vlXResource and vlXPwd (VD-2280)

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VISULOX Release 4.0.1 (December 2023)

- **Oracle Linux / Red Hat 7 deprecated**
- SEC: Several adjustments after pentests (VD-2165)
- SEC: Several adjustments after pentests (VD-2167)
- SEC: Support for new Java-11 (VD-2221)
- ENH: Additional color for login page (VD-2161)
- ENH: Backend Captcha (VD-2166)
- ENH: Configuration option to hide PIN values in frontend (VD-2193)
- ENH: User feedback in VISULOX Cockpit for messages to users (VD-2202)
- ENH: Filtering application online states in VISULOX Cookpit (VD-2203)
- ENH: Privat host management import / export (VD-2208)
- ENH: Client language taken into account (VD-2210)
- ENH: Alternate sshpass prompt detection (VD-2218)

- ENH: Audit usage of VISULOX Portal Console (VD-2229)
- FIX: Handling passcache secrets via piping on CLI (VD-1984)
- FIX: Sporadic Workspace timeout (VD-2220)

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VISULOX Release 4.0.0 (September 2023)

- New improved login and Workspace
Captcha, Password Reset, Application Request via Workspace, Checkout Zone, Quick Upload Section, Favourites, Application Groups, Recently Used, Running applications, Force Authentication, enhanced Search and Sort
- SEC: New Tomcat version for VISULOX Gateway and VISULOX Portal
- ENH: Bruce Force prevention (VD-1947)
- ENH: Policy based OTP setup (VD-1978)
- ENH: Support of Native Client on Ubuntu 22.04 (VD-1982)
- ENH: OTP with SHA1 and SHA256 (VD-1993)
- ENH: transitimport validates characters in filenames (VD-2010)
- ENH: Diskprotection for VISULOX Filestore (VD-2011)
- ENH: New VISULOX end2end Monitoring (VD-2017)
- ENH: Sandbox for VISULOX Transit Shell and Firefox Wrapper - vlxjail (VD-2038)
- ENH: PAM user authentication (VD-2107)

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VISULOX Release 3.6.3 (July 2023)

- SEC: New Apache version for VISULOX Gateway and VISULOX Portal
- ENH: Mailinggroups in GUI and CLI (VD-1986)
- ENH: Mailinggroup CLI parameter for Access Policy (VD-2006)
- ENH: Filetransit with project tagging (VD-1977)

- ENH: Diskprotection extended to file store (VD-2008)
- ENH: RD Gateway authentication with common user (VD-1996)
- FIX: HTML5 client in Firefox version 106 and later is now supported (VD-1992)
- FIX: Cleanup of temp file (VD-2021)
- FIX: LDAP Connection with umlauts (VD-2012)
- FIX: Transitimport with "space" in filename (VD-2004)

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VISULOX Release 3.6.1 (March 2023)

- Actionlinks in mails for access and transit approval (VD-1919)
- Actionlinks in mails for external MFA (VD-1933)
- VISULOX Runtime Environment 1.2 (VD-1872)
- SEC: Protecting sgdadmin URL (VD-1715)
- ENH: File check script for Microsoft Defender (VD-1827)
- ENH: Microsoft LAPS integration (VD-1860)
- ENH: All scripts can have additional arguments (VD-1921)
- ENH: Mail client with templates (VD-1926)
- ENH: VISULOX freeRDP applications with RDP configuration file (VD-1988)
- ENH: RD Gateway authentication with common user (VD-1996)
- ENH: Diskprotection extended to File Store (VD-2008)
- ENH: Transitimport validates characters in filename (VD-2010)
- FIX: MFA does not fail on Gateway timeout (VD-1102)

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VISULOX Release 3.5.0 (October 2022)

- New VISULOX logging facility based on journald



- New licensed module: OCR extension
- VISULOX Runtime Environment updated to VISULOX RTE 1.2
- ENH: Update to ETCD v3.5 (VD-1659)
- ENH: License usage reports (VD-1702)
- ENH: visulox portal admin command to change the VISULOX Portal Admin (VD-1713)
- ENH: visulox status command with fields parameter (VD-1733)
- ENH: Presave internal rejected files in Transit Zone (VD-1738)
- ENH: Prevent Unix bash history tracking during login, using vlxUnix.exp (VD-1734)
- ENH: New datasource is enabled by default (VD-1755)
- ENH: Separate MFA request during login process (VD-1626, VD-1769)
- ENH: RHEL8 IDM (VERSION: 4.9.6, API_VERSION: 2.245) supported (VD-1770)
- ENH: Testing and howto for VISULOX Transit on Ubuntu (VD-1804)
- ENH: Live player in session controller (VD-1809)
- ENH: Provide VLX Resource to standard application connections Unix/Windows (VD-1810)
- ENH: Event content search in online player (VD-1816)
- ENH: New default VISULOX window manager: JVM (VD-1818)
- ENH: Update to VISULOX RTE 1.2 (VD-1828)
- ENH: Configurable GUI offset for Session Controller (VD-1846)
- FIX: Several text / message corrections and renaming
- FIX: MFA does not fail on Gateway timeout (VD-1102)
- FIX: Warning of unconfigured action scripts in Integrity-Check removed (VD-1729)
- FIX: Latest versions of some javascript files (VD-1730)
- FIX: Accounts with "password never expires" handled correctly in VISULOX Cockpit (VD-1731)
- FIX: Firefox Wrapper now in extra archive (VD-1732)
- FIX: Command Guard script validation in VISULOX Cockpit (VD-1752)
- FIX: LDAP pagesize is configurable (VD-1832)

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VISULOX Release 3.4.1 (May 2022)

- CVE-2021-42340 CVE-2021-40438
- SEC: Extended header for X-XSS-Protection (VD-1666)
- ENH: Support pull external OTP validation (VD-1102)
- ENH: Offline player canvas with scaling and scrollbars (VD-1657)
- ENH: Added visulox-gateway support command (VD-1673)
- ENH: Login feedback based on policy (VD-1681)
- ENH: Sort on filesize and filesignature in Cockpit Archive File View (VD-1695)
- ENH: License usage reports (VD-1702)
- ENH: MFA script for RSA SecureID added (VD-1710)
- ENH: Update VISULOX Logos (VD-1712)
- FIX: Wrong download URLs for client after update (VD-1591)
- FIX: Command Connect re-arrange during login optimized (VD-1665)
- FIX: Missing CLI option in Transit Policy -recording on|off (VD-1679)
- FIX: Offline player style issues (VD-1680)
- FIX: store migrate on archive (VD-1694)
- FIX: VLXNODE: host and user profile with the same name (VD-1699)
- FIX: Curl and proxy (VD-1696)
- FIX: VISULOX transit import fails with relative path to file (VD-1703)

ENH = Enhancement, FIX = Fixed, SEC= Security CVE = Common Vulnerabilities and Exposures
VS = VISULOX Support Ticket, VD = VISULOX Development Task

VISULOX Release 3.4.0 (March 2022)

- **BigUpload will be discontinued** and is **now integrated in File Transfer**
- ENH: Checkout password displayed in File Checkout Area, Reports and in VISULOX Cockpit (VD-1285)
- ENH: Integrity-Check of database connection (VD-1545)
- ENH: Recorder improved (smaller files) (VD-1572)
- ENH: Gateway IP listed in VLX Cockpit / Online view (VD-1584)
- ENH: Checkout password displayed in Workspace and event table (VD-1589)
- ENH: Better usability during download of large files (VD-1597)
- ENH: Extended webserver header for security reasons (VD-1603)

- ENH: Extended check for transitmapping (VD-1604)
- ENH: Better Integrity Check in VISULOX X11 Forwarding (VD-1606)
- ENH: visulox transit delete supported (VD-1609)
- ENH: GUI title with serveral placeholders (VD-1614)
- ENH: Integrity-Check verifies FQDN length (VD-1625)
- ENH: Improved Integriity-Checks (VD-1630)
- ENH: New archive mode: nosnapshot (VD-1644)
- FIX: Matching objects in VISULOX Command Line Interface (VD-847)
- FIX: Adding an Archive Server to VISULOX Cluster without restart (VD-984)
- FIX: yum update on local gateway setups (VD-1582)
- FIX: Wrong download URLs for client after update (VD-1591)
- FIX: Matching objects in VLX Commandline Interface (VD-847) (VD-1608)
- FIX: SIEM integration with error logging (VD-1617)
- FIX: Returncode of visulox status of several commands corrected (VD-1621)
- FIX: Webservice user now uses logical name (VD-1636)
- FIX: Command Connect handles resource with wrong password (VD-1641)
- FIX: Large snaphot creation removed in session controller (VD-1647)

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VISULOX Release 3.3.3 (November 2021)

- Major update for VISULOX PORTAL
- CVE-2021-35649 CVE-2021-35650 CVE-2021-33037
- ENH: Handling five digit toplevel domains (VD-1579) (VS-920)
- ENH; Recoder optimization (VD-1572) (VD-1574)
- ENH: Placeholders in messages (VD-1562)
- ENH: VISULOX PORTAL uses pam stack only for local Unix users (VD-1560)
- ENH: More design parameters added (VD-1536)
- ENH: With no Transit Policy, the Transit Policy and the Transit Zone is disabled in Workspace (VD-1541)
- ENH: Integrity-Check supports timedatectl (VD-1535)

- ENH: Template and configuration for load balancer probing file (VD-1559)
- ENH: Fluxbox design (VD-1491)
- FIX: Player handling with screen change before recording started (VD-1580)
- FIX: Cookpit - correction in application creation (VD-1471)
- FIX: Cookpit - correction in application creation / AppWizzard vlx Controls (VD-1465)
- FIX: Upload multiple selected files in FT-Client (VD-1368)
- FIX: bindfs not cancelled correctly in Big Upload mode - additional fixes (VD-1517)
- FIX: File Transfer with spaces in directory (VD1526)
- FIX: Core file Fluxbox (VD-1563)
- FIX: Error closing Command Connect (VD-886)

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VISULOX Release 3.3.2 (September 2021)

- ENH: Customizable Login / Workspace color design and company logos (VD-1513)
- ENH: SMS Kannel interface support timeout (VD-1519)
- FIX: Resize Command Connect shell arrangement (VD-1511)
- FIX: bindfs not cancelled correctly in Big Upload (VD-1517)
- FIX: (Security) information process table reduced (VD-1421)

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VISULOX Release 3.3.1 (August 2021)

- CVE-2019-17567 CVE-2020-1935 CVE-2020-1938 CVE-2020-8284 CVE-2020-8285
CVE-2020-8286 CVE-2020-13938 CVE-2020-13950 CVE-2019-17569 CVE-2021-2446
CVE-2021-2447 CVE-2021-22901 CVE-2021-25122 CVE-2021-25329 CVE-2021-26690
CVE-2021-26691 CVE-2021-30641 CVE-2021-31618 CVE-2020-35452
- ENH: end2end availability monitoring (VD-1302)

- ENH: VISULOX PORTAL configuration from VISULOX Service without registration (VD-1420)
- FIX: Connection AD with dh key too small (VD-1494)
- FIX: Application Assistant and application presentation (VD-1488)

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VISULOX Release 3.3 (June 2021)

- **VISULOX PORTAL Service Embedded**
- **VISULOX Helpdesk is no longer available**
- RPM package signatures can be used for the VISULOX RPM packages
- New Application Assistant in VISULOX Cockpit
- ENH: Branding of login page ([.Access Branding](#)) (VD-1459)
- ENH: Accesspoint management (VD-1477)
- ENH: end2end monitoring ([How to setup VISULOX end2end monitoring](#)) (VD-1302)
- ENH: Integrity-Check for Transit Zone (VD-1455)
- ENH: Access consent during login (VD-1444)
- CVE: CVE-2021-2248 CVE-2021-3450 CVE-2021-2177 CVE-2021-2221

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5 Known Issues

- **Access Management**

- VISULOX 2FA is not supported in case of a Third Party Authentication.
- 2FA & Unix user profiles without a profile in datastore are not supported (Created profiles in datastore based on Unix users are supported).
- Reset OTP keys via VISULOX Cockpit is not available for Unix users.

- **File Transit**

- Files with non-ASCII characters sometimes are presented wrong.
- File names with special chars like "\ / : * ? " <> |" that are transferred to Windows servers will be substituted.
- VISULOX FTPD does not support IPv6.
- Depending on the Tomcat version, the file size is limited to 4GB.
- If two persons are using the same user name to connect to a Unix application server, this can lead to an undefined behaviour regarding the Transit Zone.
- For File Transfer within Command Connect, MaxSessions in sshd_config on the destination server has to be set at least to 2.
With a MaxSession setting of 1, only the FT Client can be used without Command Connect.

- **Cooperation / Assistance**

- If the source and destination displays in a cooperation have different keyboard layouts, this can cause side effects.
- Dual Control is currently only possible in observation mode for members.

- **Objects / Datastore**

- Character and doc applications are displayed in VISULOX Cockpit / Online and Filter Objects, but these applications can not be selected in policies and can not be recorded, locked, etc.
- Objects in the datastore do not support the following special chars: "/ ; #=\+" for VISULOX PORTAL Administrators.

- **VISULOX Portal**

- The VISULOX PORTAL Console is not supported on Safari browsers.
- After the command visulox-portal discover gateway -local, the following entries are missing in /opt/SUNWsgdg/httpd/httpd-default/conf/extra/gateway/httpd-gateway.conf:
SSLProxyCheckPeerExpire off and ProxyPass /lb_endpoint.html.
- Secondary VISULOX Portal servers must be online and have a connection to the Primary to attach VISULOX.
- TTAXPE and RDP session must have the same color depth.
- XRDP on VISULOX Portal servers is not supported (VISULOX Portal supports x11 native, so it makes no sense using an x11-client to map RDP to x11 from a server which maps x11 to RDP).

- Redrawing issues with session controller in seamless RDP sessions.
- Launching Windows applications using the HTML5 client in a Firefox private window is not supported.
- HTML5 applications closed via X on the tab will still be displayed as running in the Workspace.
- Enhanced graphics application setting has to be enabled for HTML5 client connections to resolve performance issues.
- Dynamic applications are not supported in VISULOX 4.

- **Miscellaneous**

- Time zone interval for Bangalore / India is not a full hour.
- Nested groups are not supported.
- In a checked out ZIP archive special chars sometimes are not displayed properly on the info page.
- Effective Policies in Cockpit / Online for Access and Application Policies are only displayed completely, if the Access Point has been provided.
- Linux file command is not reliable on Oracle Linux 8. A workaround is available on request.
- Platform with SELINUX and Unix vlxtransit based on NFS Home Shares works only with NFS4.2.
- AD LDAP paging with a pagesize of 100 can cause issues (an LDAP paging configuration parameter has been implemented).
- Printing with HTML5 client requests a valid VISULOX-Portal certificate.