

HCLSoftware

Domino 14.5 EA2 Auto Update

OpenNTF, January 2025

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HCLSoftware

Domino Auto Update

Notify -> Download -> Distribute -> Install

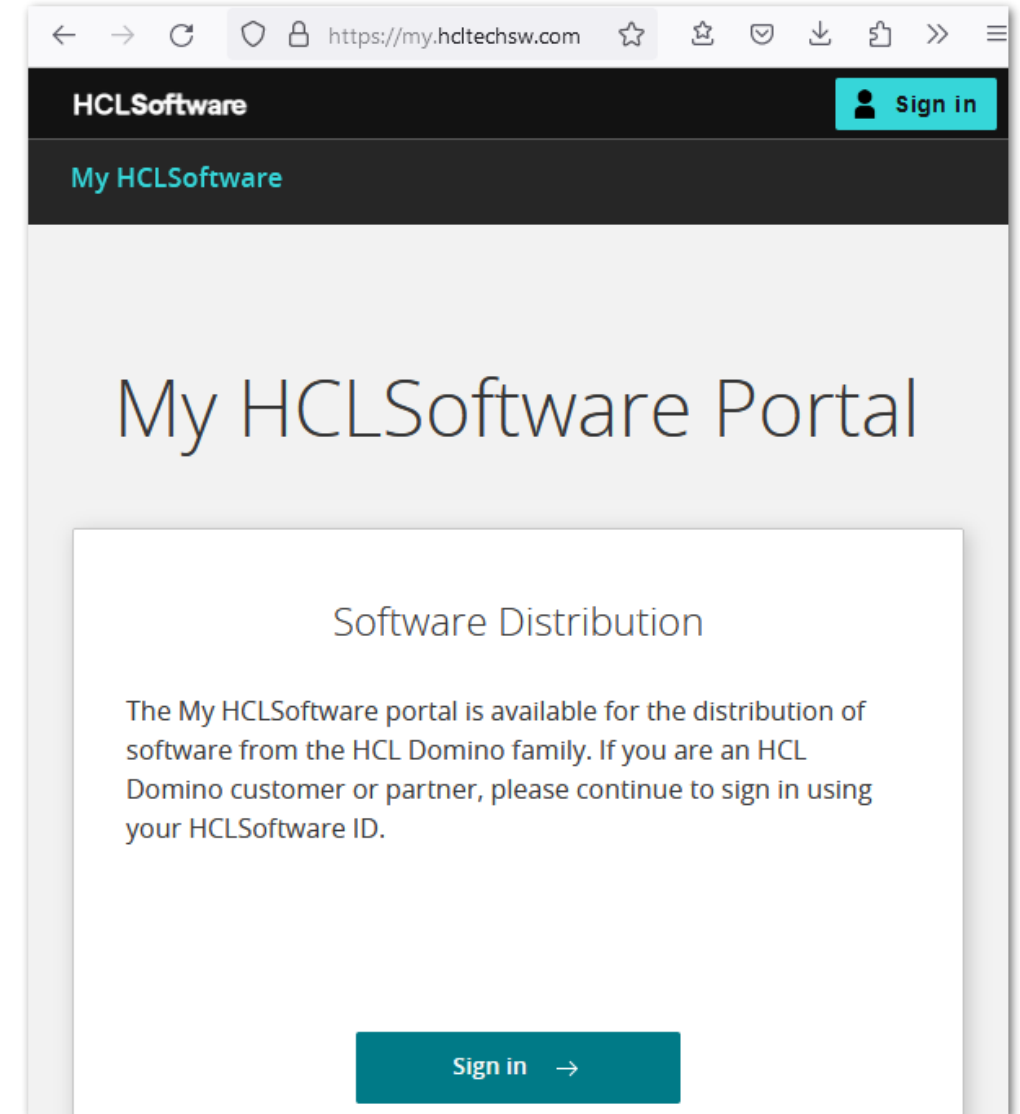


Domino 14.0 “Auto Update”

- Notification for new software (names.nsf)
- List available software packages
- Download software packages into autoupdate.nsf
- Distribute Server software to specified servers (Release/FP/IF)
- Provides the **base** for installations
 - Integrated with My HCLSoftware Portal (**MHS**)
 - Leverages **MHS** download API implemented for Domino Auto Update
- New in Domino 14.5 EA 1+2
 - Update Domino on Windows and Linux automatically

My HCLSoftware Download Portal (MHS)

- MHS is the new download portal
 - <https://my.hcltechsw.com/>
Provides a modern and easy to use, fast software search and download experience
 - Replaced the existing Flexnet download portal
- Provides a download API implemented for Domino AutoUpdate
 - Documented API also used by Daniel's Domino Download script
 - Leveraged in the HCL Domino OpenSource Container project




My HCLSoftware Download Portal (MHS)











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[Home](#) > [Downloads](#) > [HCL Domino](#) > [Domino](#) > 14.0 Fix Pack 3 Interim Fix 2

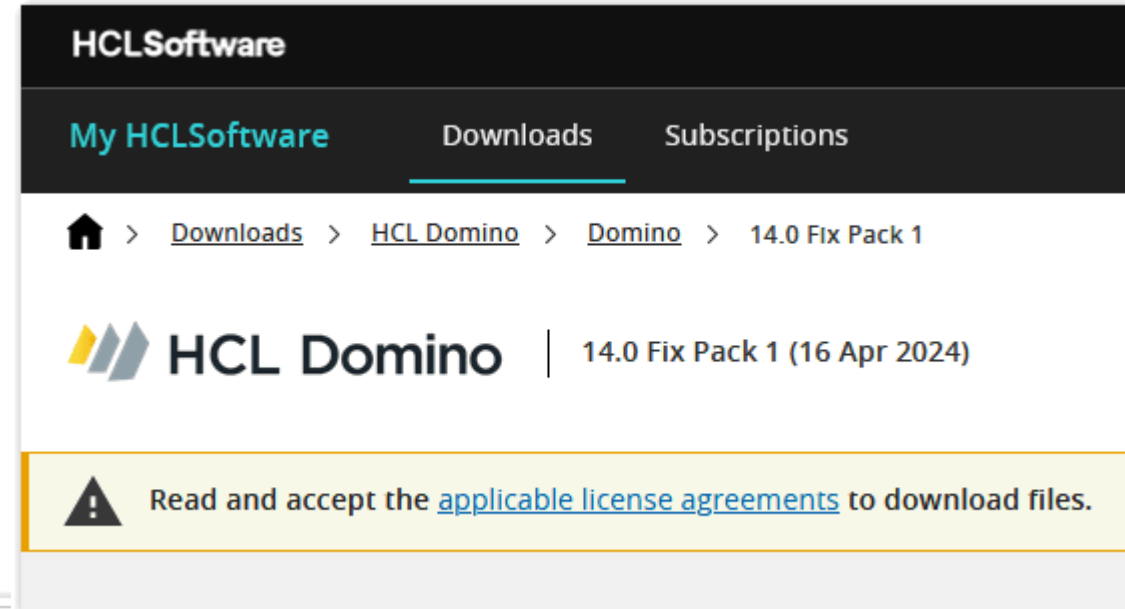
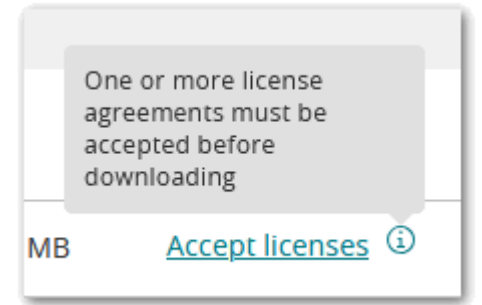
 **HCL Domino** | 14.0 Fix Pack 3 Interim Fix 2 (18 Dec 2024)


Downloads

Name 	Description	Platform	Released	Size	Actions
140FP3HF15-aix64.tar	HCL Domino Server 14.0FP3IF2...	aix	18 Dec 2024	188.2 MB	  
140FP3HF16-linux64.tar	HCL Domino Server 14.0FP3IF2...	linux	18 Dec 2024	73.31 MB	  
140FP3HF17_W64.exe	HCL Domino Server 14.0FP3IF2...	windows	18 Dec 2024	25.51 MB	  

My HCLSoftware Accept License Agreements

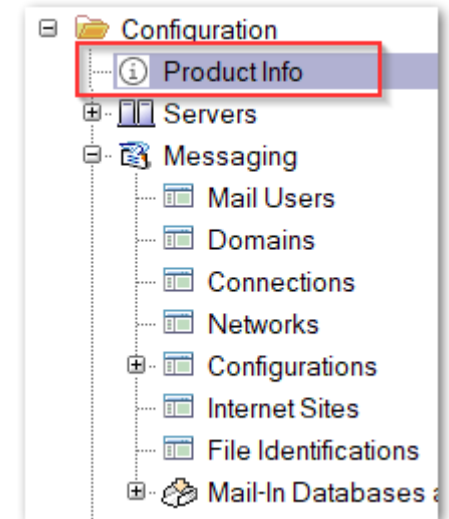
- Before downloading software, you have to accept license agreements
 - Only once per company and product group
 - When license changes (e.g. for a new product version) you might need to agree again
- Applies also to My HCLSoftware API
 - A proper error message is shown in autoupdate.nsf
 - In case of error, confirm the license and restart download



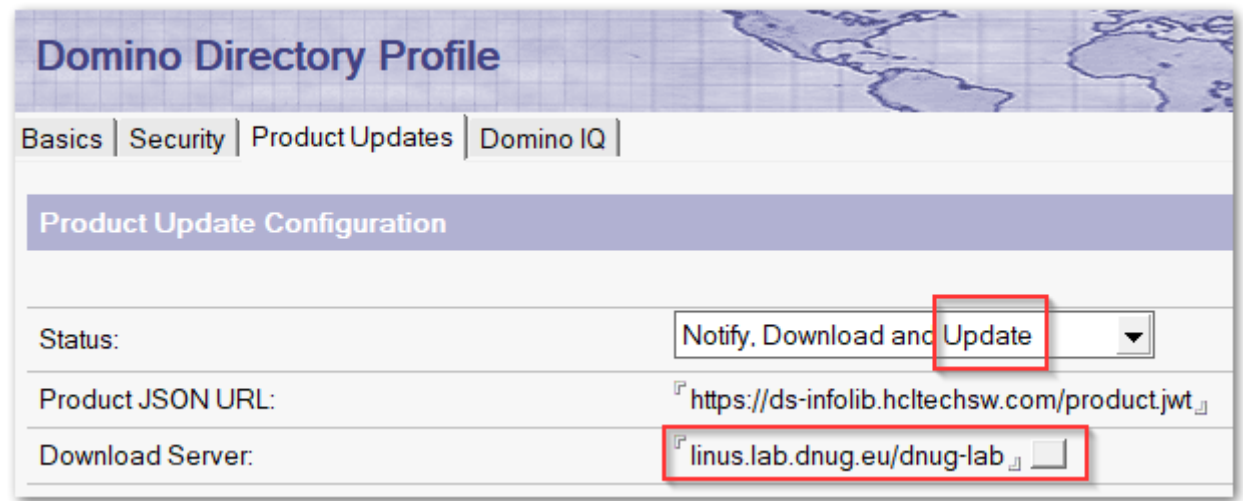
Status:	 Download Error
Error:	There are unaccepted license agreements
Proposed action:	Check your My HCLSoftware Portal account and assure you are authorized to download software.

Auto Update Setup & Auto Notify

- Domain wide feature configured in Domino Directory
- One designated download server loads software & schedules distributions
 - Proxy support including authentication to bridge networks (DMZ)
- Product Info documents are available in Domino Directory



Product	Description	Latest Version
domino	HCL Domino Server	14.0FP3IF2
notes	HCL Notes Client	14.0FP3
traveler	HCL Traveler	14.0.0 FP1
verse	HCL Verse	3.2.3
leap	HCL Domino Leap	1.1.3
hei	HCL Enterprise Integrator	14.0
nomad	HCL Nomad	1.0.14
restapi	HCL Domino REST API	1.1
SAPConnector	HCL Domino Connector for SAP Solutions	2.0.2



product.jwt

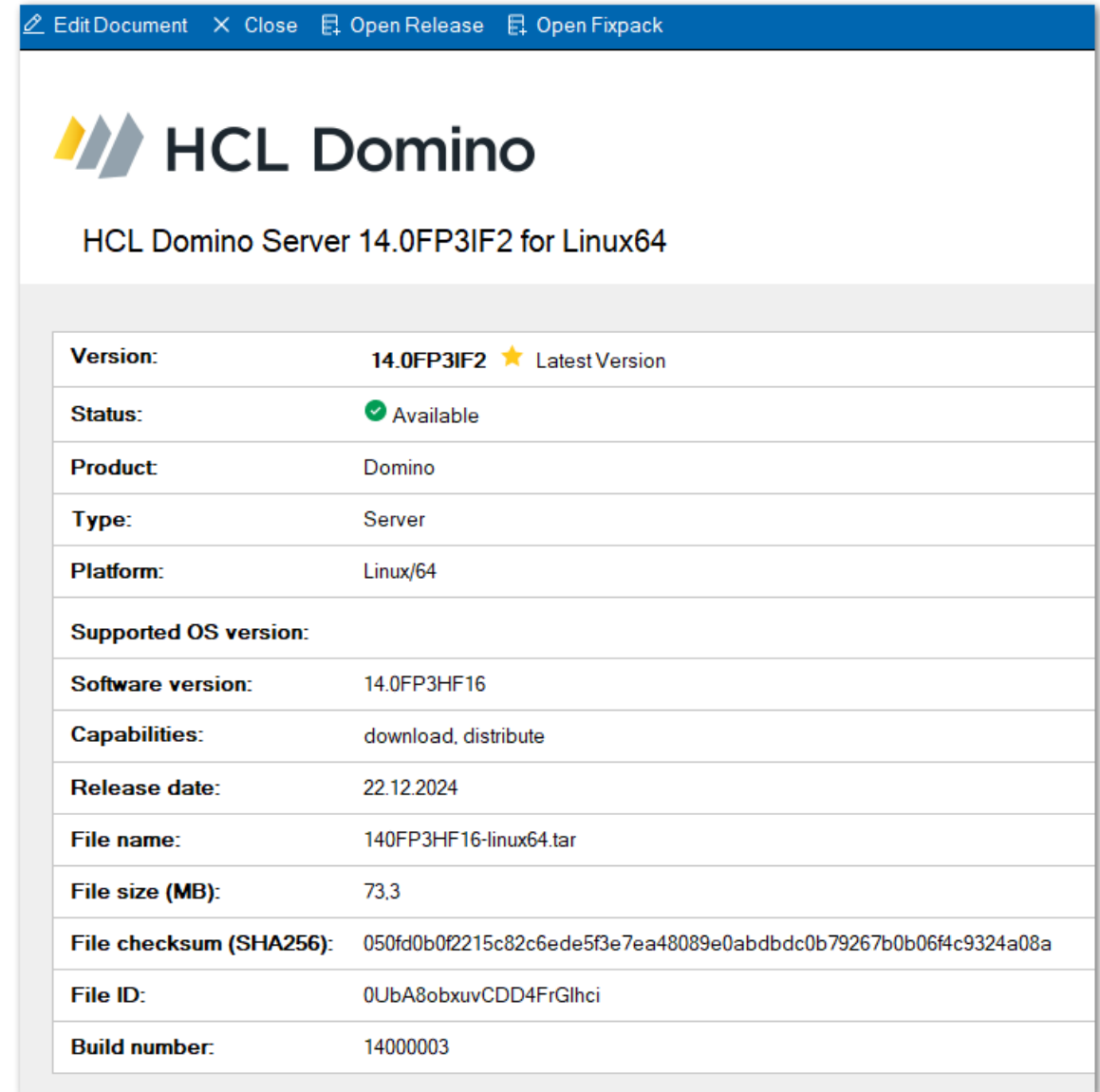
- Located on the same HCL server providing the fixlist
 - Configured in Domino Directory profile
 - <https://ds-infolib.hcltechsw.com/product.jwt>
- Contains information about products
 - Downloaded by autoupdate into names.nsf
 - Converted into Notes items
 - Also contains Logo Data
- JSON data provided as JWT
 - Signed by build room with an Ed25519 key
 - Public keys are “baked” into Domino to validate the JWT

```
{
  "publishDateTime": "20240416183434",
  "product": [
    {
      "product": "domino",
      "description": "HCL Domino Server",
      "descriptionLong": "The World is Powered by HCL Domino. Domino powers the apps that run your business.",
      "productNews": "\t• AutoUpdate integrated with Notes AUT Catalog\r\n\t• DAOS resync snapshot documenta",
      "platform": [
        "Windows/64",
        "Linux/64",
        "AIX/64",
        "OS/400"
      ],
      "language": [
        "English|EN",
        "French|FR",
        "German|DE",
        "Italian|IT",
        "Japanese|JA",
        "Korean|KO",
        "Spanish|ES",
        "Simplified_Chinese|ZH_CN",
        "Traditional_Chinese|ZH_TW",
        "Brazilian_Portuguese|PT_BR",
        "Arabic|AR",
        "Czech|CS",
        "Dutch|NL",
        "Russian|RU",
        "Swedish|SV",
        "Polish|PL"
      ],
      "version": "14.0FP1",
      "osVersion": [
        "Windows/2022",
        "Windows/2019",
        "RedHat Enterprise 9"
      ],
      "comments": "",
      "releaseDate": "20240416",
      "info": [
        "What's New in Domino 14.0=https://help.hcltechsw.com/domino/14.0.0/admin/whats_new_in_domino.html",
        "What's New in Domino 14.0FP1=https://help.hcltechsw.com/domino/14.0.0/admin/wn_140FP1.html",
        "HCL Software Homepage=https://www.hcltechsw.com/domino",
        "Notes Domino 14.0FP1 Release Notes=https://support.hcltechsw.com/csm?id=kb_article&sysparm_article=",
        "Notes Domino Fix List=https://ds-infolib.hcltechsw.com/ldd/fixlist.nsf",
        "HCL Domino 14.0 Product Documentation=https://help.hcltechsw.com/domino/14.0.0/admin/index.html?sc",
        "How to register as a Customer on HCLSoftware portals=https://support.hcltechsw.com/csm?id=kb_artic",
        "HCL Community Forum=https://support.hcltechsw.com/community",
        "HCL Support Homepage=https://support.hcltechsw.com/csm"
      ],
      "logoData": "iVBORw0KGgoAAAANSUHEUGAAAUA0AAABACAYAAAB8X7XAAAABHlDQ1B1J00MgcH3V\r\nZmlsZSZAQAAKJF9KT1Iw1AUH",
      "aANKQ\r\npLg4Cq4FB38Wqw4uzr06uAqC4A+Iq4uToouUeF95aBHjhcF700+ew3v3AUKzylS2\r\nZwJQnctIJ+JiLr8qB17hQxhDEBCVMKkr",
      "4Hv2drFqcm3aRgH0h9se2PMSCwC7Qa\r\nntv19bNute8D/DFxpHX+tCcx+kt7oaJEjYHABULjuaPieLkdjDzpkIE5kp+WUCw\r\nn72f0T",
      "Y0tAAAT501EQVR42u2deZ0Vxb3HPZUIDvKqC+kR0o6K0KEwDiVIEU\r\nnOC540Mhta1RRRk1w920Ei0Zzc15CTt0Yt3FBic847suTD5+4oRvX0"
    }
  ]
}
```



Auto Update Software Documents

- Software documents
 - Created from `software.jwt`
 - Platform, Product, Type, Language, Version
 - `FileName`, SHA 256 Hash, Size in Bytes
 - `FileID` – Internal MHS identifier used for download
- File attachment
 - DAOS is enabled by default for `autoupdate.nsf`
 - Files are loaded from **MHS** via HTTPS (LibCurl)
 - Target server download file attachments via NRPC



The screenshot shows a software document interface for HCL Domino. The title bar includes 'Edit Document', 'Close', 'Open Release', and 'Open Fixpack'. The main content area displays the HCL Domino logo and the product name 'HCL Domino Server 14.0FP3IF2 for Linux64'. Below this is a table of metadata:

Version:	14.0FP3IF2 ★ Latest Version
Status:	✔ Available
Product:	Domino
Type:	Server
Platform:	Linux/64
Supported OS version:	
Software version:	14.0FP3HF16
Capabilities:	download, distribute
Release date:	22.12.2024
File name:	140FP3HF16-linux64.tar
File size (MB):	73.3
File checksum (SHA256):	050fd0b0f2215c82c6ede5f3e7ea48089e0abdbdc0b79267b0b06f4c9324a08a
File ID:	0UbA8obxuvCDD4FrGIhci
Build number:	14000003

software.jwt

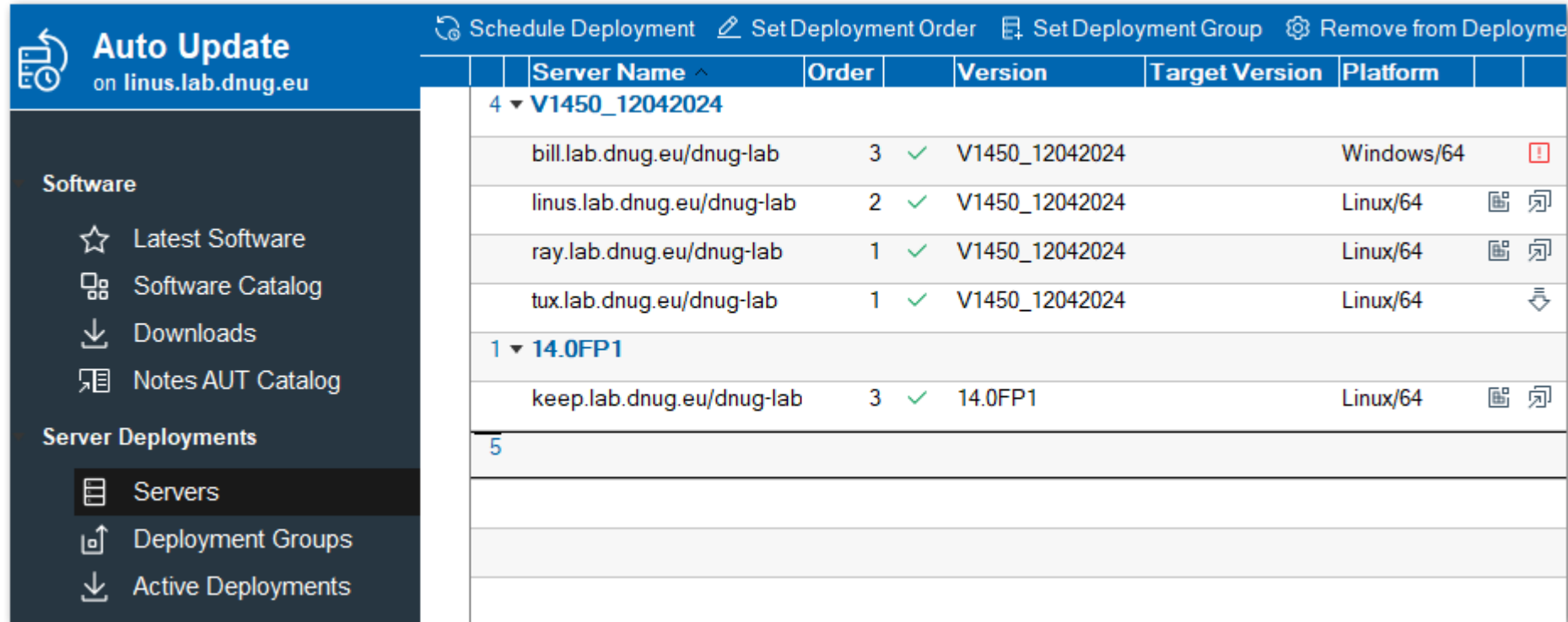
- Also located on Fixlist servers
- Contains information about software web-kits
 - Downloaded by autoupdate into autopdate.nsf
 - Converted into Notes items
 - JSON data provided as JWT
- Also contains configuration
 - My HCLSoftware API entry points

```
{
  "configuration": {
    "tokenURL": "https://api.hcltechsw.com/v1/apitokens/exchange",
    "downloadURLPrefix": "https://api.hcltechsw.com/v1/files/",
    "downloadURLSuffix": "/download"
  },
  "software": [
    {
      "product": "domino",
      "productDisplay": "Domino",
      "productName": "Domino",
      "description": "HCL Domino Server 12.0.2 for AIX English",
      "type": "server",
      "typeDisplay": "Server",
      "typeExt": "server",
      "platform": "AIX/64",
      "language": "",
      "languageDisplay": "",
      "target": "",
      "label": "12.0.2",
      "labelVersion": "12.0.2",
      "version": "12.0.2",
      "fixpack": "",
      "interimfix": "",
      "hotfix": "",
      "fileName": "Domino_12.0.2_AIX_English.tar",
      "fileID": "wXLKwyrZgThmGGTOigTsh",
      "fileChecksum": "0de2e85d165a08309583c2fd025466fafadfd1146b2756e434787e208ce3e56a",
      "osVersion": "",
      "fileSize": 678072320,
      "buildDate": "",
      "releaseDate": "",
      "rules": "",
      "comments": "",
      "capabilities": "download",
      "info": {}
    },
    {
      "product": "domino",
      "productDisplay": "Domino",
      "productName": "Domino",
      "description": "HCL Domino Server 12.0.2 for IBMi English",
      "type": "server"
```



Auto Update Download Server & Target Servers

- Autoupdate task runs on all Domino 14+ servers in the domain
- Download server
 - Schedules downloads and distributions
- Target servers
 - Execute pending requests
 - Update their own server status documents in autoupdate.nsf

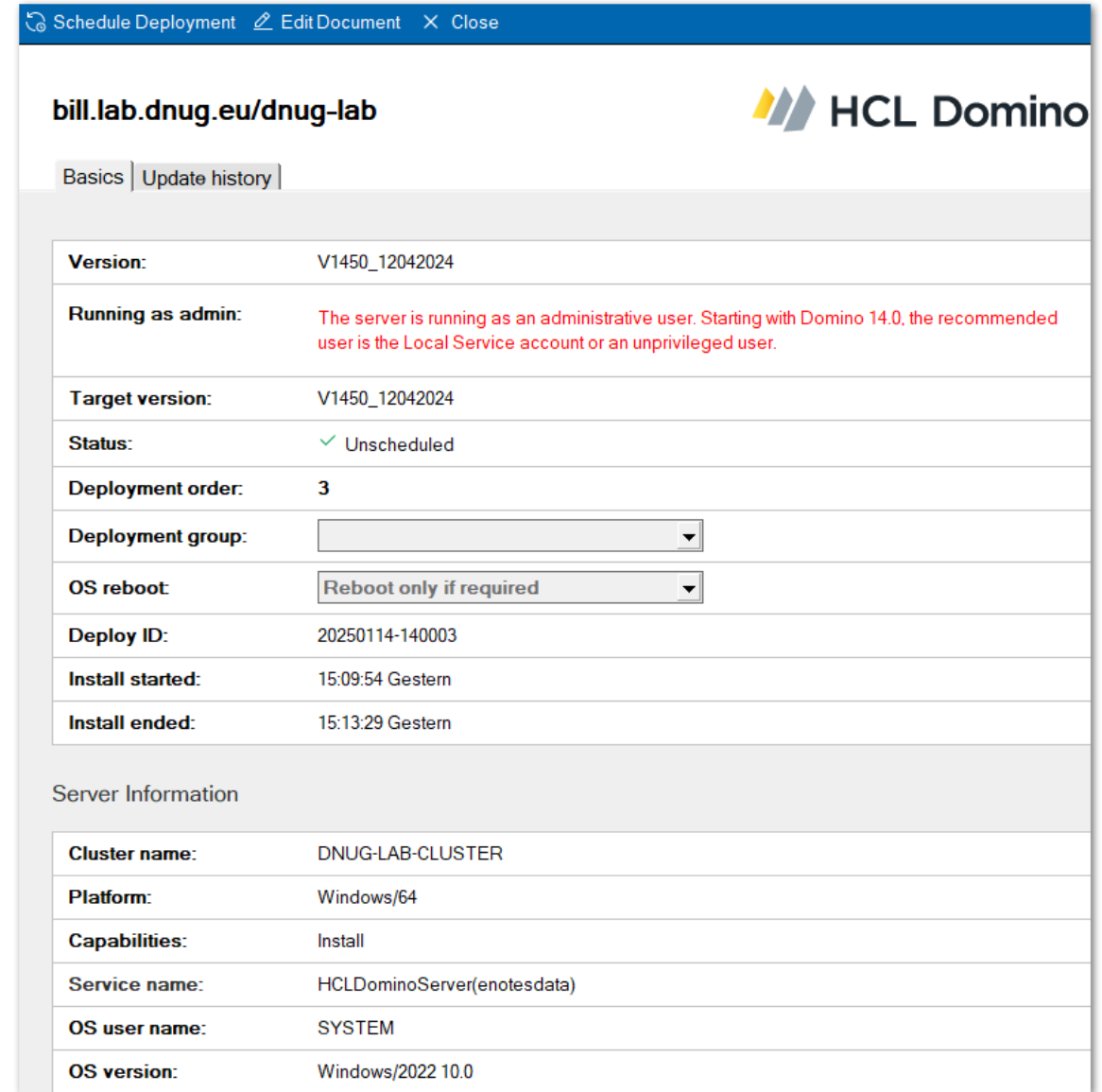


The screenshot shows the 'Auto Update' interface for the domain 'linus.lab.dnug.eu'. The interface includes a navigation menu on the left and a main table of deployment tasks. The table has columns for 'Server Name', 'Order', 'Version', 'Target Version', and 'Platform'. The tasks are grouped by version: 'V1450_12042024' and '14.0FP1'. The 'Servers' menu item is highlighted in the navigation menu.

Server Name	Order	Version	Target Version	Platform
4 ▾ V1450_12042024				
bill.lab.dnug.eu/dnug-lab	3	✓ V1450_12042024		Windows/64
linus.lab.dnug.eu/dnug-lab	2	✓ V1450_12042024		Linux/64
ray.lab.dnug.eu/dnug-lab	1	✓ V1450_12042024		Linux/64
tux.lab.dnug.eu/dnug-lab	1	✓ V1450_12042024		Linux/64
1 ▾ 14.0FP1				
keep.lab.dnug.eu/dnug-lab	3	✓ 14.0FP1		Linux/64
5				

Auto Update Server Documents

- Autoupdate "Server documents"
 - Each server maintains its own "server document" in `autoupdate.nsf`
 - Contains version, platform and other detailed information
 - Used to schedule updates (Target version and schedule)
 - Also used to trigger distributions
 - Status of server
- Central replica approach
 - Avoids save/replica conflicts
 - Ensures immediate status updates



The screenshot shows the 'Schedule Deployment' window for a server document. The window title is 'Schedule Deployment | Edit Document | Close'. The URL is 'bill.lab.dnug.eu/dnug-lab' and the HCL Domino logo is visible. The 'Basics' tab is selected, and the 'Update history' tab is also visible. The main content area displays the following information:

Version:	V1450_12042024
Running as admin:	The server is running as an administrative user. Starting with Domino 14.0, the recommended user is the Local Service account or an unprivileged user.
Target version:	V1450_12042024
Status:	✓ Unscheduled
Deployment order:	3
Deployment group:	<input type="text"/>
OS reboot:	Reboot only if required
Deploy ID:	20250114-140003
Install started:	15:09:54 Gestern
Install ended:	15:13:29 Gestern

Below this information is a section titled 'Server Information' with the following details:

Cluster name:	DNUG-LAB-CLUSTER
Platform:	Windows/64
Capabilities:	Install
Service name:	HCLDominoServer(enotesdata)
OS user name:	SYSTEM
OS version:	Windows/2022 10.0

Auto Update Configuration

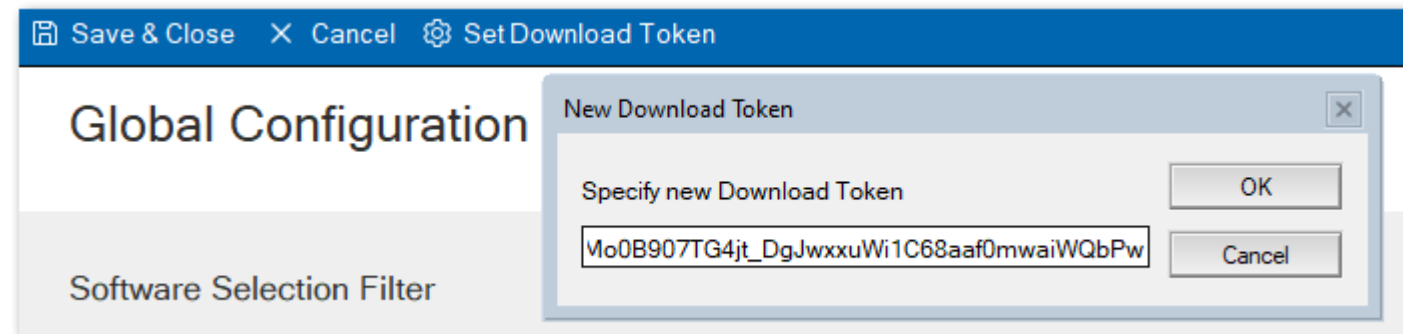
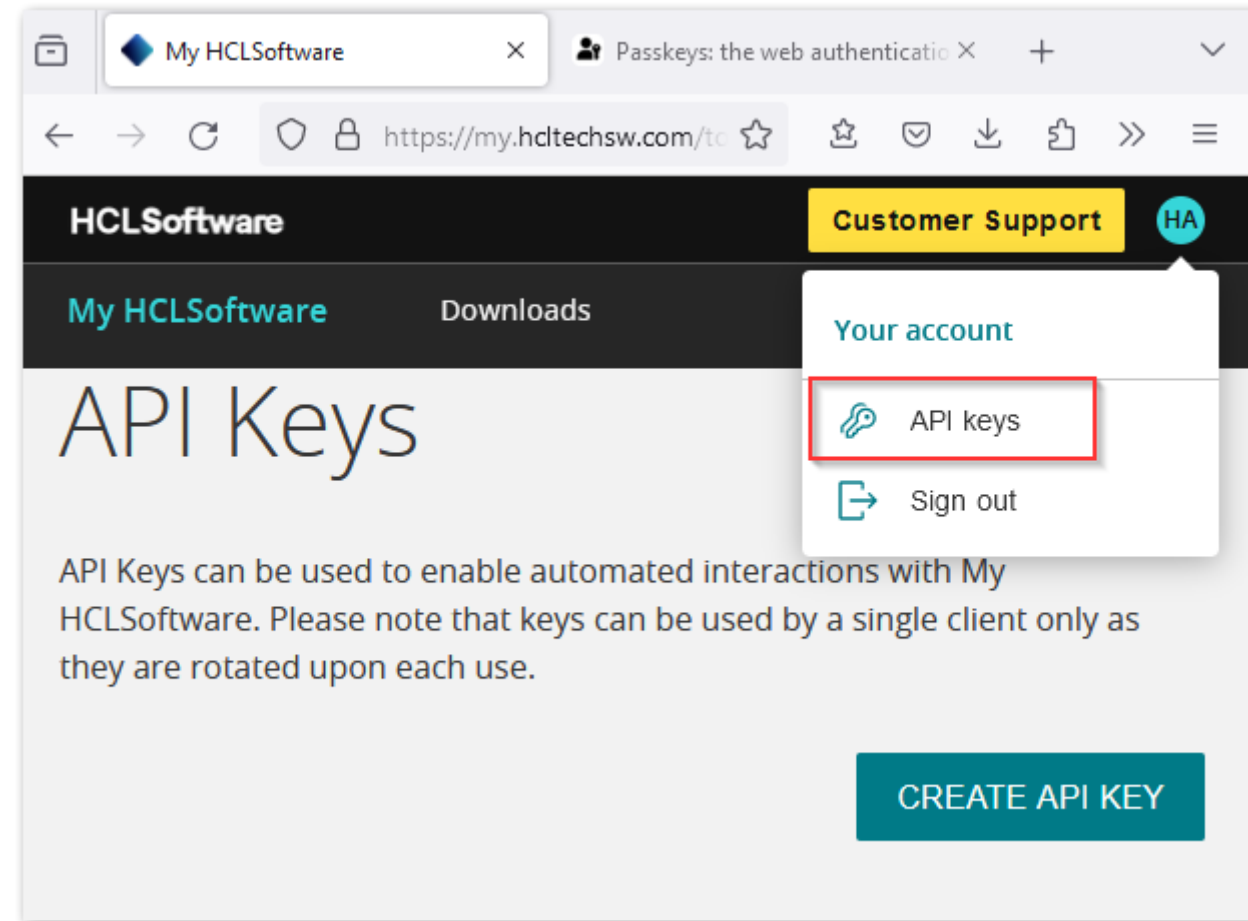
- Global Configuration
 - Software selection filter
 - Log Level
 - Download settings
 - Proxy settings
- Action to set the “Download Token”
- Setting Proxy password and Download Token requires Notes 12.0.1 client or higher
 - “Notes named document” functionality is introduced in Notes 12.0.1

The screenshot shows the 'Global Configuration' dialog box. The title bar includes 'Save & Close', 'Cancel', and 'Set Download Token' (highlighted with a red box). The dialog is organized into three main sections:

- Software Selection Filter:** Contains four dropdown menus: 'Products' (Domino, Notes, Traveler), 'Platforms' (AIX/64, Linux/64, Macintosh/64, OS/400, Windows/32, Windows/64), 'Languages' (German, English), and 'Types' (Admin/Designer, AutoInstall, Basic Client, Standard Client, Language Pack, Server).
- Configuration:** Contains six rows of settings: 'Log level' (normal), 'Directory design' (Update Domino Directory design), 'Software list URL' (https://ds-info.lib.hcltechsw.com/software.jwt), 'Max. download speed (MB/sec)', 'Download timeout (minutes)' (10), and 'Comments'.
- Proxy Settings:** Contains three rows: 'Proxy URL', 'User', and 'Password' (masked with asterisks).

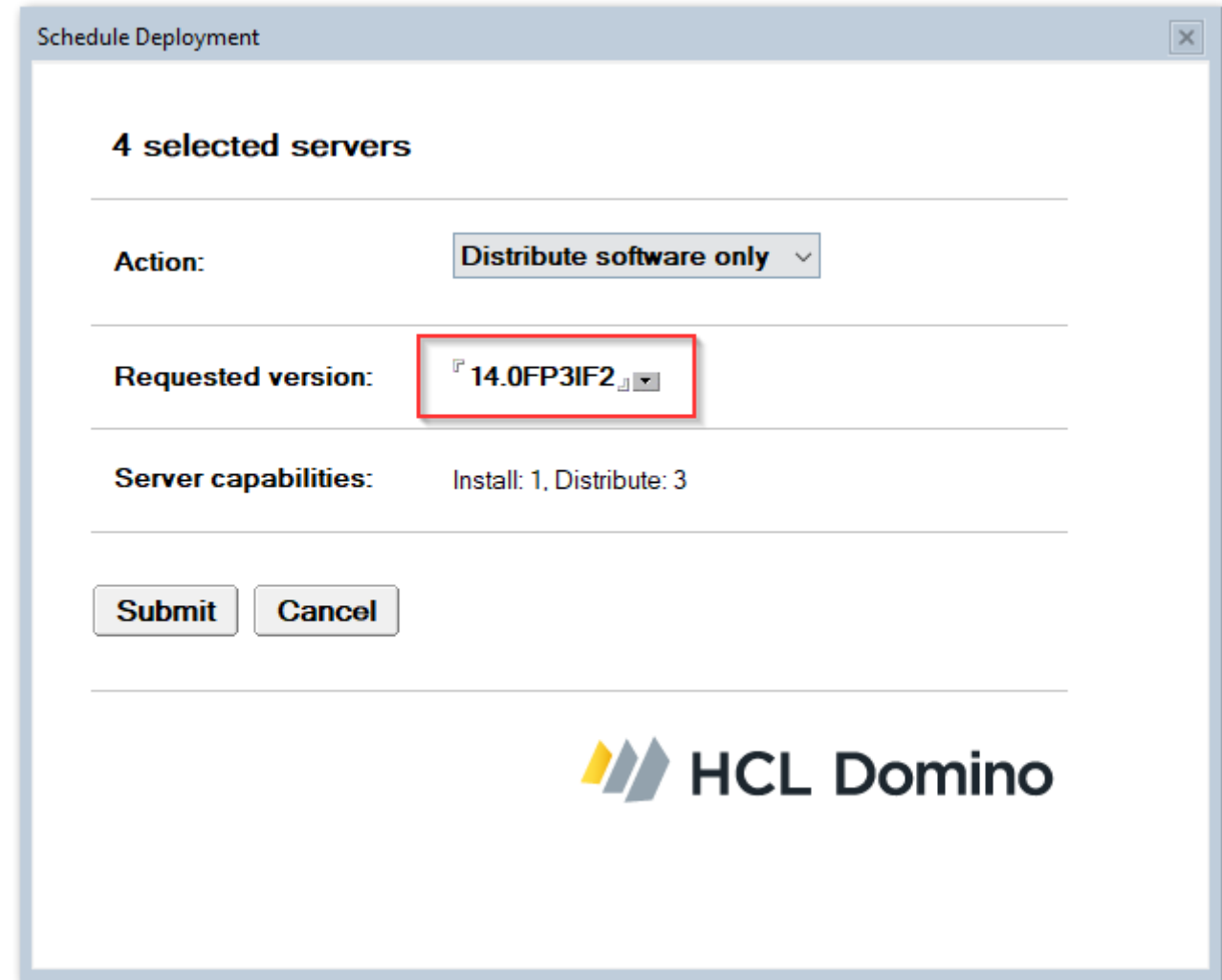
Auto Update API Keys

- Log into the MHS Portal
- Acquire an API Key from MHS
 - Specify a unique name for the token
 - Copy the token
- Click on “Set Download Token”
 - Paste the token
- Once configured autoupdate.nsf is ready for download
- Important
 - API Token is a rotating token
 - Use separate token per download server!



Auto Update Distribute

- Scheduling a deployment will automatically download software if not yet downloaded
- Autoupdate knows about release / FP / IF / HF dependencies
 - Scheduling an update for an IF would even know which HF to download for each platform
 - The server document shows HF and IF version



Schedule Deployment


4 selected servers

Action: Distribute software only ▾

Requested version: 14.0FP3IF2 ▾

Server capabilities: Install: 1, Distribute: 3

Submit Cancel

 HCL Domino

Auto Update Servertask Schedule

- Low Priority
 - Check for information updates accessing external HCL server (product.jwt, software.jwt)
 - Default: 60 minutes
 - Notes.ini AUTOUPD_LOW_PRIO_DL_INTERVAL_MINS=n
- High Priority
 - All other operations including download (because they are admin initiated)
 - Default: 5 minutes
 - Notes.ini AUTOUPD_HIGH_PRIO_DL_INTERVAL_MINS=n
- Command Line manual override

```
Tell autoupdate process all
Tell autoupdate process low
Tell autoupdate process high
```

HCLSoftware

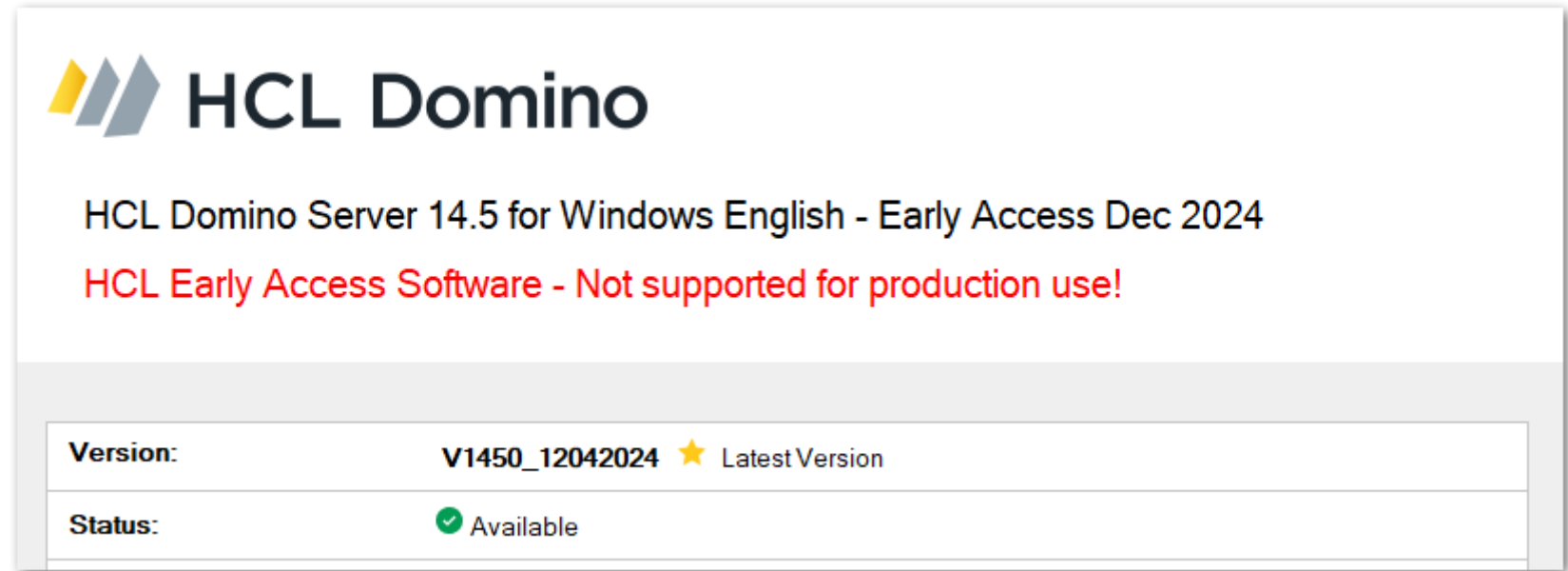
Domino 14.5 EA2 AutoInstall

- Update Domino on Windows & Linux
- Self Live Patch AutoInstall



Domino 14.5 Early Access Disclaimer

- Domino Early Access is beta software intended for test only
 - The UI shows a red warning message for EAP software
 - Details are subject to change
- AutoUpdate 14.0 +14.5 works fine after 13.12.2024
- Still recommended to patch
 - Patches available in the EAP forum for Domino on Windows and Linux



The screenshot displays the HCL Domino software interface. At the top, the HCL Domino logo is shown. Below the logo, the text reads "HCL Domino Server 14.5 for Windows English - Early Access Dec 2024" and "HCL Early Access Software - Not supported for production use!". A table below provides version and status details:

Version:	V1450_12042024 ★ Latest Version
Status:	✓ Available

Domino Auto Install - Capabilities

- Capabilities

- Download
- Distribute
- Install
- No longer available

- Latest version

- For each platform, type, code stream, language

↓ Mark for Download ✕ Cancel Download ↺ Reset Download 🗑 Delete Software 📄 New Software					
		Platform	Type	Language	Description
59	▼	Server			
3	▼	V1450_12042024			
	✓	Windows/64	📄 Server	★	HCL Domino Server 14.5 for Windows English - Early Access Dec 2024
		Linux/64	📄 Server	★	HCL Domino Server 14.5 for Linux English - Early Access Dec 2024
		AIX/64	📄 Server	★	HCL Domino Server 14.5 for AIX English - Early Access Dec 2024
3	▼	14.0FP3IF2			
		Windows/64	📄 Server	★	HCL Domino Server 14.0FP3IF2 for Windows 64bit
		Linux/64	📄 Server	★	HCL Domino Server 14.0FP3IF2 for Linux64
		AIX/64	↓ Server	★	HCL Domino Server 14.0FP3IF2 for AIX64
2	▼	14.0FP3IF1			
	⊖	Windows/64	Server		HCL Domino Server 14.0FP3IF1 for Windows 64bit
	⊖	Linux/64	Server		HCL Domino Server 14.0FP3IF1 for Linux64
3	▼	14.0FP3			
	✓	Windows/64	📄 Server		HCL Domino Server 14.0FP3 for Windows 64bit
	✓	Linux/64	📄 Server		HCL Domino Server 14.0FP3 for Linux
	✓	AIX/64	↓ Server		HCL Domino Server 14.0FP3 for AIX
3	▼	14.0FP2IF3			
		Windows/64	📄 Server		HCL Domino Server 14.0FP2IF3 for Windows 64bit
		Linux/64	📄 Server		HCL Domino Server 14.0FP2IF3 for Linux64

Domino Auto Install - Schedule

Schedule Deployment

Server **bill.lab.dnug.eu/dnug-lab**

Action: **Schedule install**

Requested version: **V1450_12042024**

Server capabilities: Install: 1

Week days: Mon Tue Wed Thu Fri Sat Sun

Scheduled time: Between **00:00** and **23:59**

Start/end date (optional): to

Submit **Cancel**

Schedule Deployment


2 selected servers

Action: **Install now**

Requested version: **V1450_12042024**

Server capabilities: Install: 2

Submit **Cancel**

 **HCL Domino**

Domino Auto Install – History Documents

Auto Update
on `linus.lab.dnug.eu`

Delete History

Update Time	Server Name	Action	Reboot	Version
-No Deploy group-				
31.12.2024 16:10:50	<code>tux.lab.dnug.eu/dnug-lab</code>	Distribute		V1450_12042024
31.12.2024 11:45:53	<code>tux.lab.dnug.eu/dnug-lab</code>	Install		V1450_12042024
02.09.2024 19:02:41	<code>bill.lab.dnug.eu/dnug-lab</code>	Install		V1450_08282024
DNUG				
31.12.2024 00:21:31	<code>linus.lab.dnug.eu/dnug-lab</code>	Distribute		14.0FP3HF16
10.09.2024 21:02:19	<code>linus.lab.dnug.eu/dnug-lab</code>	Distribute		14.0FP2
05.06.2024 23:57:09	<code>ray.lab.dnug.eu/dnug-lab</code>	Distribute		14.0FP1

Software

- Latest Software
- Software Catalog
- Downloads
- Notes AUT Catalog

Server Deployments

- Servers
- Deployment Groups
- Active Deployments

Deployment History

- Domino
- AutoInstall

Domino Auto Install - Log

- Information

- Status
- Version
- Time / Runtime

- Reboot status


- Depends on settings


- Install Log

- Install log file with all details
- Domino Release, Fixpack, IF logs
- NSDs, JVM patcher logs in case of error
- All logs are available in history document

Status:	✔ Success
Prior version:	V1450_08282024
New version:	V1450_08282024
Action:	Install
Deploy ID:	20240902-165848
Start time:	Mo 02.09.2024 19:02:41:00
End time:	Mo 02.09.2024 19:06:38:00
Server name:	bill.lab.dnug.eu/dnug-lab
Platform:	
Runtime (sec):	232
Installer reboot request:	Recommended
OS reboot status:	Reboot disabled by configuration
Admin reboot action:	A reboot is recommended, but admin disabled reboot. Please reboot at the next convenient time.
Comments:	

Last updated: Mo 02.09.2024 19:06:44


install_20240902-165848.log


HCL_Domino_Installieren_09_02_2024_19_06_24.log

Domino Auto Install – Reboot

- Installations on Windows might require reboot
 - There could be a reboot already pending
 - Domino Installation might require a reboot
- Reboot settings in Server document
 - Never
 - “If recommended or required” (by InstallAnywhere)
 - “If required” (by InstallAnywhere)
 - Always
- Detailed logging for reboot
 - If rebooted and why rebooted
 - Reboot icon in view
 - Dump of pending rename files before and after install

Screenshot of the Domino Schedule Deployment dialog box for **tux.lab.dnug.eu/dnug-lab**. The dialog shows deployment details for version V1450_12042024, which is currently "Unscheduled". The "OS reboot" dropdown menu is open, showing options: "Reboot only if required", "Never reboot after install", "Reboot if recommended or required", "Reboot only if required", and "Always reboot after install". The "Reboot only if required" option is currently selected.

Property	Value
Version:	V1450_12042024
Target version:	V1450_12042024
Status:	✓ Unscheduled
Deployment order:	1
Deployment group:	
OS reboot:	Reboot only if required
Deploy ID:	
Install started:	
Install ended:	15:21:54 Heute
Comments:	

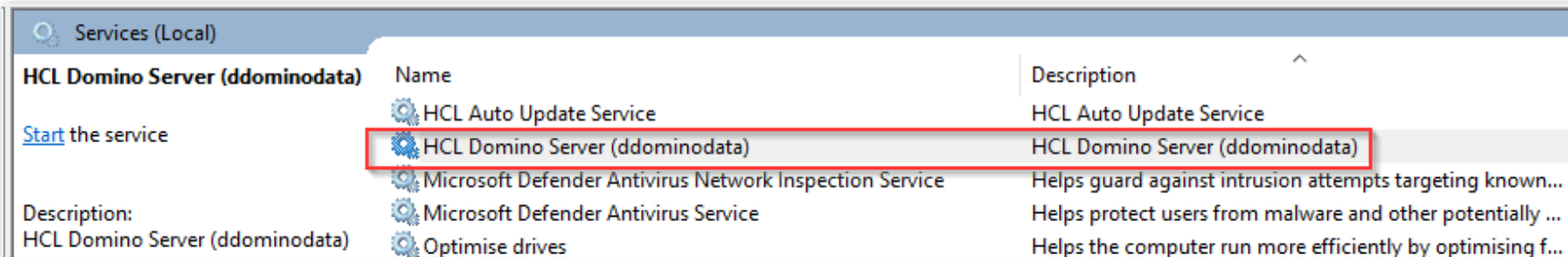
Domino Auto Install – Requirements

- The server must be an install platform
 - Windows or Linux
- Autoinstall must be available
 - Running as service on Windows
 - Available with SUID permissions set on Linux
- Sufficient free disk space
 - Binary directory 2 GB
 - Data directory 5 GB
- Partitioned servers and containers only support 'distribute'
- The server must be started as a service
 - Windows service or Linux systemd
- If requirements are missing
 - Server capabilities are downgraded to distribute
 - Server cannot be installed
 - Information what is missing is highlighted in server document
 - Schedule dialog shows details about server schedules

Basics Update history	
Version:	V1450_12042024
Missing requirements:	SUID bit is not set on autoinstall program
Target version:	V1450_12042024
Status:	✓ Unscheduled
Deployment order:	1

Domino Auto Install requires Domino running as a Service

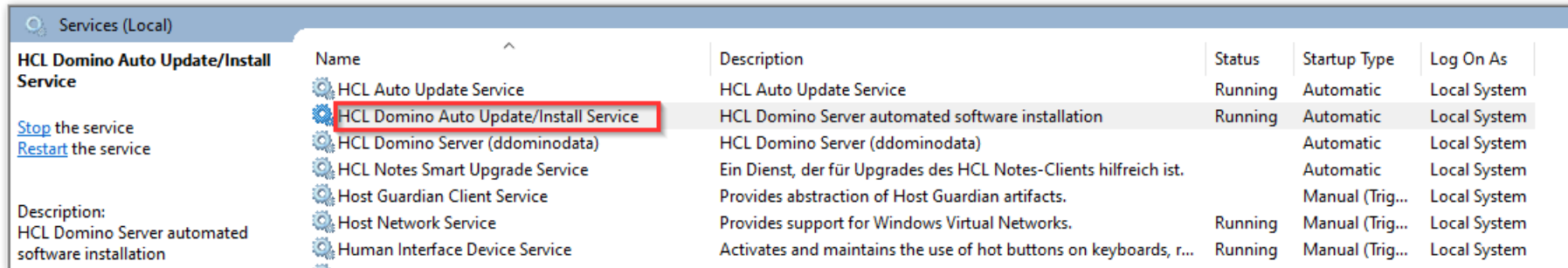
- Only when running as a service there is a defined way to stop and restart a Domino server
 - Windows Service
 - Linux systemd Service
 - The server is shutdown via a defined service interface before the update is initiated
 - Server is cleanly restarted after the update starting the service
- Servers not started as a service have their capabilities downgraded to “Distribute”



Server Information	
Platform:	Windows/64
Capabilities:	Distribute
OS user name:	daniel.nashed
OS version:	Windows/10/64 10.0
Domino build date:	04.01.2025
Build number:	14000003
AutoInstall version:	

Domino Auto Install Program

- Domino server runs with unprivileged users
 - On Linux “notes” user
 - On Windows since Domino 14.0 as “Local Service”
 - Installations require admin permissions
- `autoinstall.exe / autoinstall`
 - Runs as **service** on Windows as **System Account**
 - Runs with **SUID** rights set on Linux
 - Installed initially by Domino InstallAnywhere



Name	Description	Status	Startup Type	Log On As
HCL Auto Update Service	HCL Auto Update Service	Running	Automatic	Local System
HCL Domino Auto Update/Install Service	HCL Domino Server automated software installation	Running	Automatic	Local System
HCL Domino Server (ddominodata)	HCL Domino Server (ddominodata)		Automatic	Local System
HCL Notes Smart Upgrade Service	Ein Dienst, der für Upgrades des HCL Notes-Clients hilfreich ist.		Automatic	Local System
Host Guardian Client Service	Provides abstraction of Host Guardian artifacts.		Manual (Trig...	Local System
Host Network Service	Provides support for Windows Virtual Networks.	Running	Manual (Trig...	Local System
Human Interface Device Service	Activates and maintains the use of hot buttons on keyboards, r...	Running	Manual (Trig...	Local System

Domino Auto Install Flow

- Autoupdate

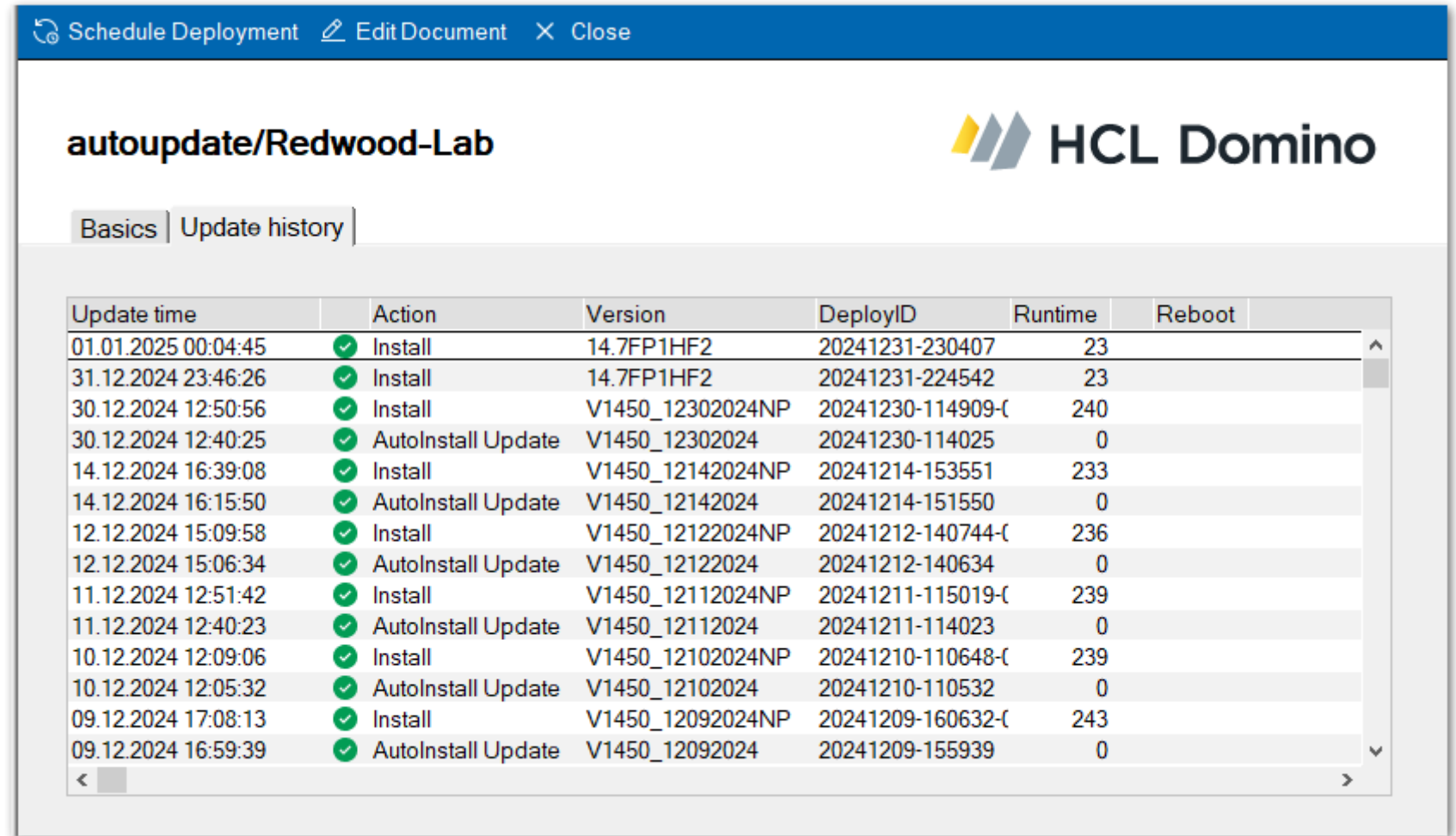
1. Downloads software (Distribute)
2. Creates request file (`autoinstall.req`)
3. On Windows the service polls for the request file
On Linux `autoinstall` is launched by `autoupdate`
4. Checks for the log file and status
5. Updates server document
6. Creates a history document

- Autoinstall

1. Reads and validates the request file `autoinstall.req`
2. Validates and extracts files via (`software.jwt`)
3. Shuts down Domino
4. Launches installers
5. Checks installs and creates install log
6. Starts Domino
Or reboots the machine

Auto Update History

- Embedded view in server document
 - “Update history” tab
 - Shows all installs for a server
- History documents for
 - Domino installs
 - AutoInstall binary updates
- Separate view for all server installations
 - Default categorized by server
 - Sortable by time



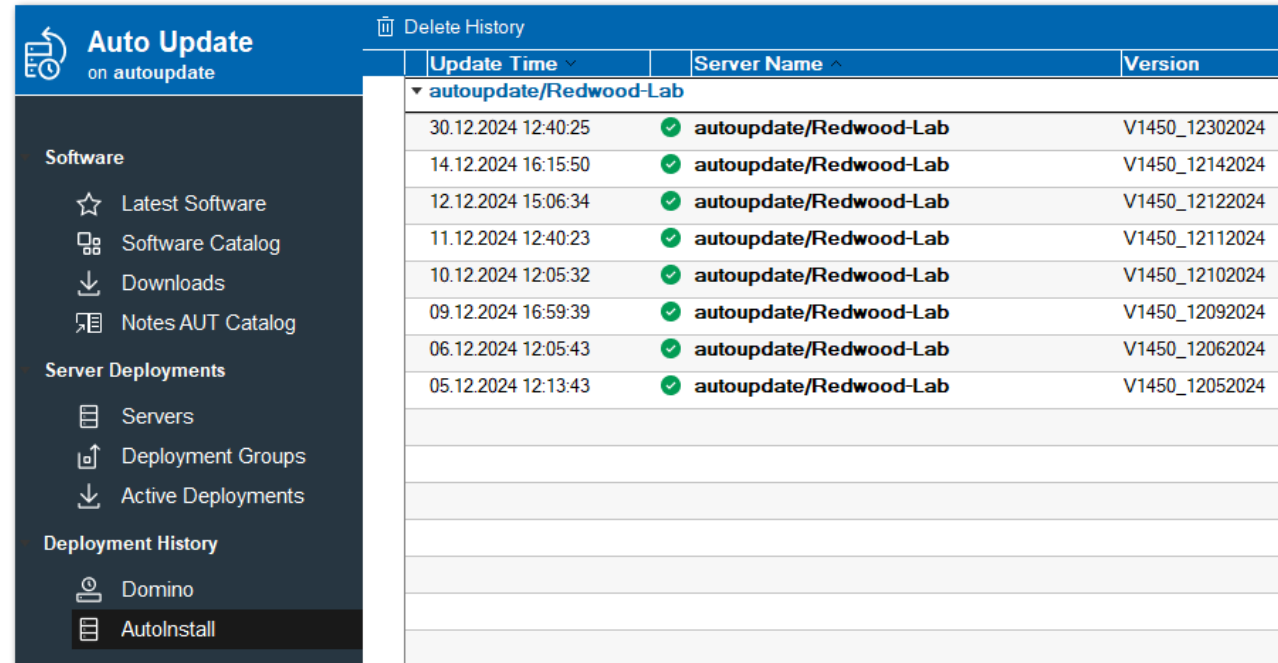
The screenshot shows the HCL Domino interface for 'autoupdate/Redwood-Lab'. The 'Update history' tab is active, displaying a table of update records. The table has columns for Update time, Action, Version, DeployID, Runtime, and Reboot. All actions are marked with a green checkmark, indicating successful installations or updates.

Update time	Action	Version	DeployID	Runtime	Reboot
01.01.2025 00:04:45	✓ Install	14.7FP1HF2	20241231-230407	23	
31.12.2024 23:46:26	✓ Install	14.7FP1HF2	20241231-224542	23	
30.12.2024 12:50:56	✓ Install	V1450_12302024NP	20241230-114909-C	240	
30.12.2024 12:40:25	✓ AutoInstall Update	V1450_12302024	20241230-114025	0	
14.12.2024 16:39:08	✓ Install	V1450_12142024NP	20241214-153551	233	
14.12.2024 16:15:50	✓ AutoInstall Update	V1450_12142024	20241214-151550	0	
12.12.2024 15:09:58	✓ Install	V1450_12122024NP	20241212-140744-C	236	
12.12.2024 15:06:34	✓ AutoInstall Update	V1450_12122024	20241212-140634	0	
11.12.2024 12:51:42	✓ Install	V1450_12112024NP	20241211-115019-C	239	
11.12.2024 12:40:23	✓ AutoInstall Update	V1450_12112024	20241211-114023	0	
10.12.2024 12:09:06	✓ Install	V1450_12102024NP	20241210-110648-C	239	
10.12.2024 12:05:32	✓ AutoInstall Update	V1450_12102024	20241210-110532	0	
09.12.2024 17:08:13	✓ Install	V1450_12092024NP	20241209-160632-C	243	
09.12.2024 16:59:39	✓ AutoInstall Update	V1450_12092024	20241209-155939	0	

Domino Auto Install Program live Self Patching

- First install is easy
 - Autoinstall is installed by InstallAnywhere installer
- But what if it needs an update?
 - Autoinstall is launching the installer and can't be replaced by InstallAnywhere
 - It might also need an update before installing the next Domino version
- Autoupdate
 - Downloads new versions of autoupdate and schedules an install (distribute + request + launch ..)
 - Creates history document

- Updating Autoinstall
 - Installs itself while running
 - No need for Domino shutdown
 - It has own build version and install log



The screenshot shows the 'Auto Update on autoupdate' interface. On the left is a navigation menu with sections: Software (Latest Software, Software Catalog, Downloads, Notes AUT Catalog), Server Deployments (Servers, Deployment Groups, Active Deployments), and Deployment History (Domino, AutoInstall). The main area displays a table with columns: Update Time, Server Name, and Version. The table shows a history of updates for the server 'autoupdate/Redwood-Lab' from 05.12.2024 to 30.12.2024, all with successful status (green checkmarks).

Update Time	Server Name	Version
30.12.2024 12:40:25	autoupdate/Redwood-Lab	V1450_12302024
14.12.2024 16:15:50	autoupdate/Redwood-Lab	V1450_12142024
12.12.2024 15:06:34	autoupdate/Redwood-Lab	V1450_12122024
11.12.2024 12:40:23	autoupdate/Redwood-Lab	V1450_12112024
10.12.2024 12:05:32	autoupdate/Redwood-Lab	V1450_12102024
09.12.2024 16:59:39	autoupdate/Redwood-Lab	V1450_12092024
06.12.2024 12:05:43	autoupdate/Redwood-Lab	V1450_12062024
05.12.2024 12:13:43	autoupdate/Redwood-Lab	V1450_12052024

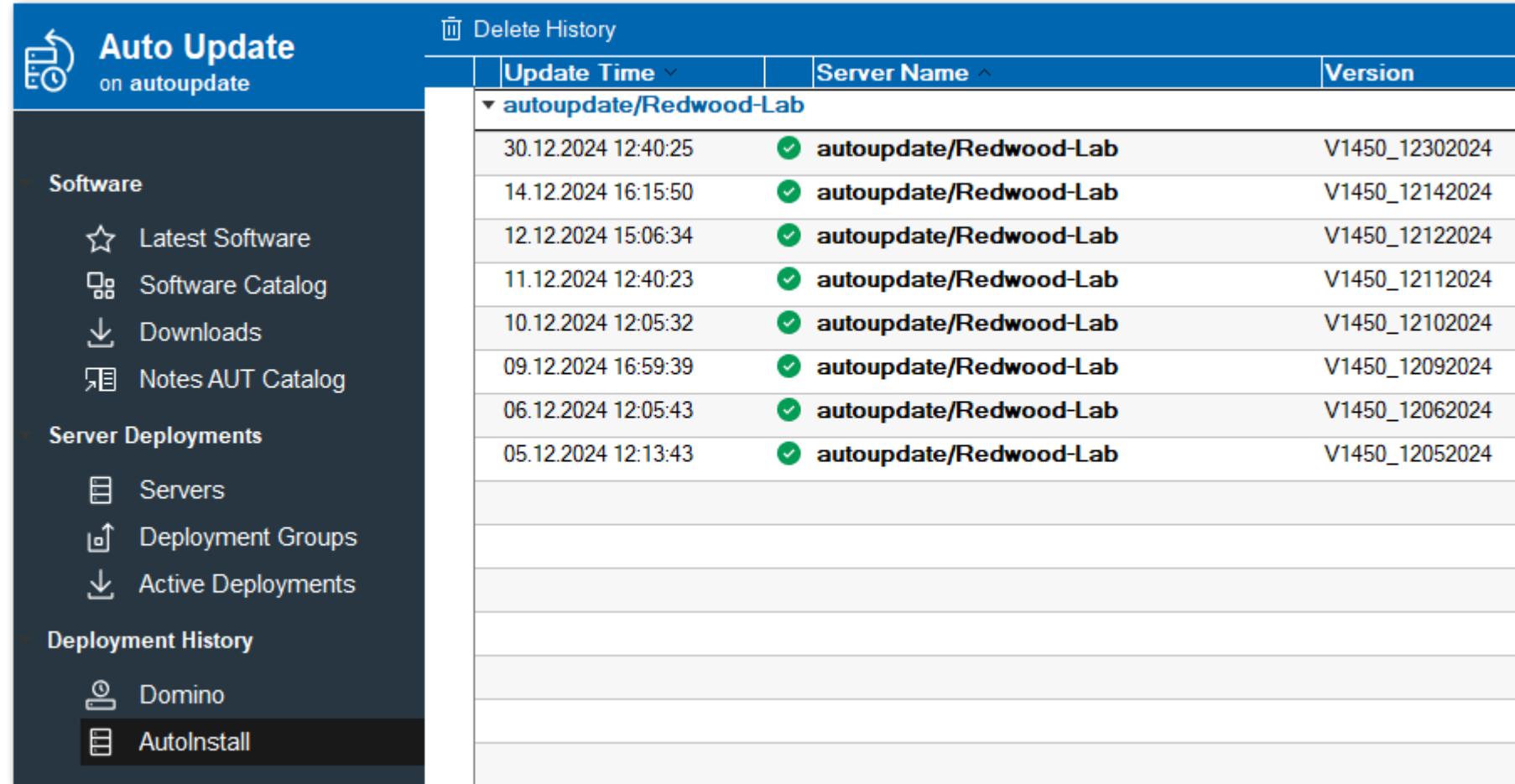
Domino Auto Install Program Install History

- Information

- Status
- Version
- Time / Runtime

- Install Log

- Install log file with all details

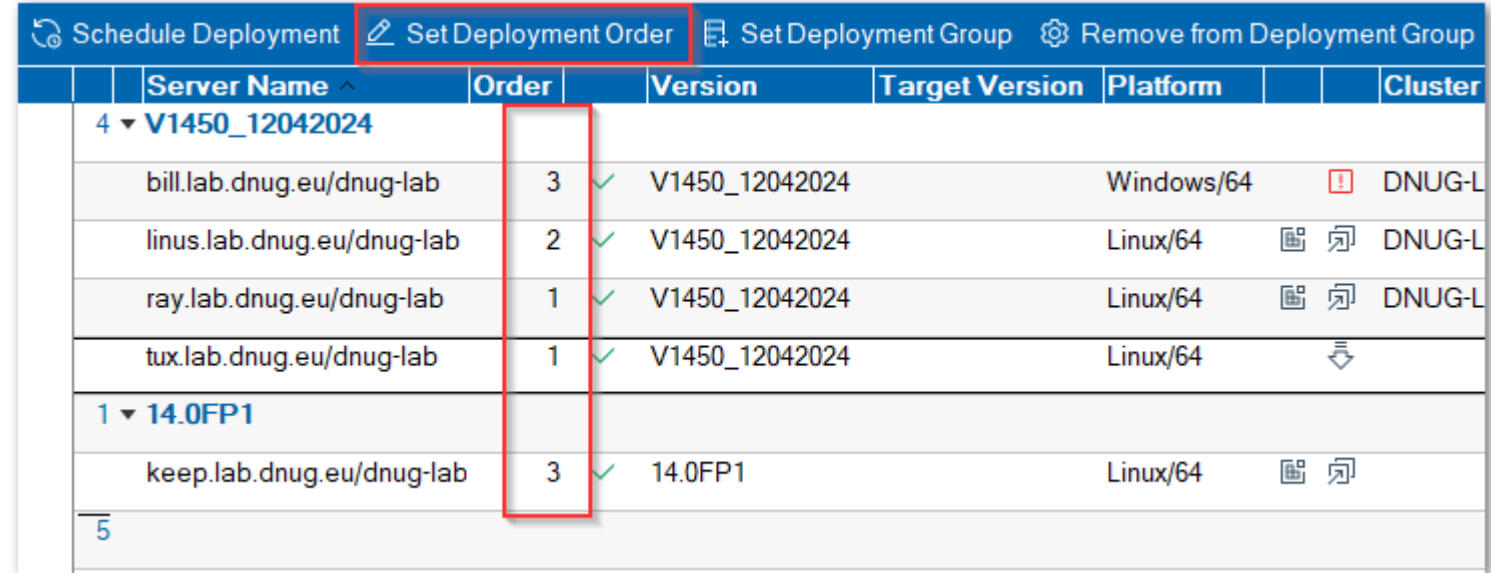


The screenshot displays the 'Auto Update on autoupdate' interface. The left sidebar contains navigation options: Software (Latest Software, Software Catalog, Downloads, Notes AUT Catalog), Server Deployments (Servers, Deployment Groups, Active Deployments), and Deployment History (Domino, AutoInstall). The main area shows a table of update history for 'autoupdate/Redwood-Lab' with columns for Update Time, Server Name, and Version. A 'Delete History' button is visible at the top right of the table.

Update Time	Server Name	Version
▼ autoupdate/Redwood-Lab		
30.12.2024 12:40:25	autoupdate/Redwood-Lab	V1450_12302024
14.12.2024 16:15:50	autoupdate/Redwood-Lab	V1450_12142024
12.12.2024 15:06:34	autoupdate/Redwood-Lab	V1450_12122024
11.12.2024 12:40:23	autoupdate/Redwood-Lab	V1450_12112024
10.12.2024 12:05:32	autoupdate/Redwood-Lab	V1450_12102024
09.12.2024 16:59:39	autoupdate/Redwood-Lab	V1450_12092024
06.12.2024 12:05:43	autoupdate/Redwood-Lab	V1450_12062024
05.12.2024 12:13:43	autoupdate/Redwood-Lab	V1450_12052024

Auto Install Deployment Order

- Flexible concept to control how to install a new version
 - When server installs are executed respecting the deployment order
 - A deployment order number can have one or multiple servers
- All deployments wait until the lower deployment order is successfully completed
 - Servers in the same deployment order are installed in parallel
 - If any server in the previous deployment order failed, the whole deployment stops!



The screenshot shows a deployment management interface with a table of servers. The table has columns for Server Name, Order, Version, Target Version, Platform, and Cluster. The 'Order' column is highlighted with a red box. The table is organized into groups: '4 V1450_12042024' and '1 14.0FP1'. The 'Order' column values are 3, 2, 1, 1, 3, and 5.

	Server Name ^	Order	Version	Target Version	Platform	Cluster
4	V1450_12042024					
	bill.lab.dnug.eu/dnug-lab	3	✓ V1450_12042024		Windows/64	! DNUG-L
	linus.lab.dnug.eu/dnug-lab	2	✓ V1450_12042024		Linux/64	DNUG-L
	ray.lab.dnug.eu/dnug-lab	1	✓ V1450_12042024		Linux/64	DNUG-L
	tux.lab.dnug.eu/dnug-lab	1	✓ V1450_12042024		Linux/64	
1	14.0FP1					
	keep.lab.dnug.eu/dnug-lab	3	✓ 14.0FP1		Linux/64	
5						

Auto Update Deployment Groups

- Deployment documents
 - Can be used to schedule deployments on multiple servers at once
 - Servers assigned to a deployment group by adding deployment group name to the server document
 - Ensures each server is exactly assigned to one deployment group
- Deployments can be scheduled for
 - One server
 - Selected servers
 - A deployment group

Schedule Deployment Add Servers Edit Document Cancel Close

Deployment Group

Basic Servers in Group

Name:	DNUG
Description:	DNUG Standard deployment group
Comments:	

Last updated: Sat 09.12.2023 17:41:34

Deployment Group

Basic Servers in Group

Server	Platform	Version	Planned Version	Order	
linus.lab.dnug.eu/dnug-lab	Linux/64	14.0		1	✓
ray.lab.dnug.eu/dnug-lab	Linux/64	14.0		1	✓

Fixpack & Interim Fix Support

- Domino 14.5 EA2 supports Fixpacks (FP) and Interim Fixes (IF)
 - But how can we test FPs and IFs when there is no release supporting autoinstall yet?
 - All the functionality needs to be tested and ready for the first 14.5 FP or IF to ship

- Solution: “Mock installers”
 - A small binary for Windows and Linux to simulate installations
 - Looks like a real installer and is signed in the same way
 - Launched with the same parameters
 - Creates the same type of logs
 - Exercises the full Release, Fixpack and IF/HF installations
 - The same installers are used for positive and negative automation tests

What is a Domino Release?

- A Domino release is usually shipped once per year (or 18 month like Domino 14.5)
- Domino uses semantic versioning for releases in separate code streams
 - For example: 12.0.1, 12.0.2, 14.0, 14.5 (Stream and daily build example: V1450_12042024)
- Contains new major features and new versions of software components
 - Like a new Java version which needs significant work and additional testing
- New template versions for system and application databases
 - This also includes translated templates.
- Releases use the InstallAnywhere installer and can be installed on any existing release
 - The installer takes care of uninstalling previous versions independent of which FP/IF/HF is installed

What is a Domino Fixpack (FP)?

- "A fixpack is collection of low-risk, high-impact fixes to help customers safely avoid known issues"
 - It might also contain smaller feature enhancements which did not make it into the release
- The current schedule based on what we have seen for 14.0 is around 4 month
- Fixpacks contain also fixes for example for iNotes Forms9.nsf
 - No translated templates are part of a fixpack
- The naming of a Fixpack is "FP" with with a consecutive number
 - For example: 14.0FP3
- The next Fixpack for a code stream contains all fixes of the previous Fixpack
 - Fixes in a Fixpack are also expected to be in the next major release
- Fixpacks use an HCL own installer which can detect Releases, Fixpacks and Hotfixes
 - The installer is able to uninstall an existing Fixpack before installing the new Fixpack
 - But the installer cannot uninstall a IF or HF

What is a Domino Hotfix (HF)?

- A hotfix is a critical fix usually for a single SPR for a single customer
 - In some special cases a customer needs multiple SPRs in a "combo-hotfix" distributed as a single HF
 - Two different Hotfixes might contain completely different fixes
- **Hotfixes should be only installed on the server which needs this specific fix and should not be shared!**
 - Fixes are exclusively distributed by HCL support to customers.
 - As soon the fixes are available on a Fixpack it is recommended to update to the Fixpack
- **The naming schema is "HF" and a consecutive hotfix number per Release and Fixpack combination**
 - Example: 14.0FP3HF8
 - The number of the hotfix cannot be used to find out if the fix is related to another fix
- **Hotfixes use a different custom HCL installer which can detect Releases, Fixpacks and Hotfixes**
 - The installer can only update the version which exactly matches the Release/Fixpack combination
- **The same HF installer (web-kit) is required to uninstall an installed HF**
- **To replace a HF you have to use this installer or install a new release, which replaces all binaries**

What is a Domino Interim Fix (IF)

- A Domino Interim Fix can contain **one or multiple fixes**
- An "IF" is a **naming convention** mapping to **different HFs per platform**
- IFs are created when important fixes have to be distributed to customers **outside the normal Fixpack schedule** available on the MHS portal (<https://my.hcltechsw.com/>)
- The next IF contains **all fixes from the previous IF** for the same Release/Fixpack combination
 - Fixes in an IF are expected to be in the next Fixpack and release
- The naming schema is "IF" and a **consecutive interim fix number** per Release/Fixpack combination
 - Example: 14.0FP3IF2
- IFs are **just a naming convention**. The file content is the same as for a hotfix

Auto Update Fixpack & Interim Fix Support

Schedule Deployment

Server autoupdate/Redwood-Lab

Action: Install now

Requested version: 14.7FP1IF2


Server capabilities: Install: 1


Submit Cancel

7	▼ Server		
1	▼ V1450_12302024NP		
✓	Linux/64	Server	★ Domino V1450 Daily Build 12302024 NP
2	▼ 14.7FP1IF2		
✓	Windows/64	Server	★ HCL Domino Server 14.6FP2IF1 Mock Server Installer for Windows
✓	Linux/64	Server	★ HCL Domino Server 14.6FP2IF1 Mock Server Installer for Linux
2	▼ 14.7FP1		
✓	Windows/64	Server	HCL Domino Server 14.6FP2 Mock Server Installer for Windows
✓	Linux/64	Server	HCL Domino Server 14.6FP2 Mock Server Installer for Linux
2	▼ 14.7		
✓	Windows/64	Server	HCL Domino Server 14.6 Mock Server Installer for Windows
✓	Linux/64	Server	HCL Domino Server 14.6 Mock Server Installer for Linux





Fixpack & Interim Fix Support

- Auto Install captures and checks the install log for each installer
 - All logs are attached to the history document
- IF installers are basically hotfix installers
 - An old IF is uninstalled before installing the next FP or HF
 - Releases don't need an HF uninstall
- Domino AutoUpdate maps IF to HF
 - Software documents contain both versions
 - Admin always schedules target by IF version
 - Installation target shows IF and HF version
- Mock installers are internal DEV tools
 - But we thought you want to see them in action

autoupdate/Redwood-Lab 

Status:	 Success
Prior version:	V1450_12302024NP
New version:	14.7FP1HF2
Action:	Install
Deploy ID:	20241231-230407
Start time:	00:04:45:00 Gestern
End time:	00:05:10:00 Gestern
Server name:	autoupdate/Redwood-Lab
Cluster name:	redwood-cluster
Platform:	Linux/64
AutoInstall version:	V1450_12302024
Runtime (sec):	23
OS reboot status:	No reboot needed
Comments:	

Last updated: Mi 01.01.2025 00:05:12

   
install_20241231-230407.log HCL_Domino_Install_12_31_2024_23_05_04.log domino-fp_20241231-230407.log domino-hf_20241231-230407.log

Domino Auto Install Demo

- Domino Auto Update functionality walk thru
- Install Domino Release + Fixpack + Interim Fix



HCLSoftware

Domino Auto Update

Example errors



My HCLSoftware Download Errors

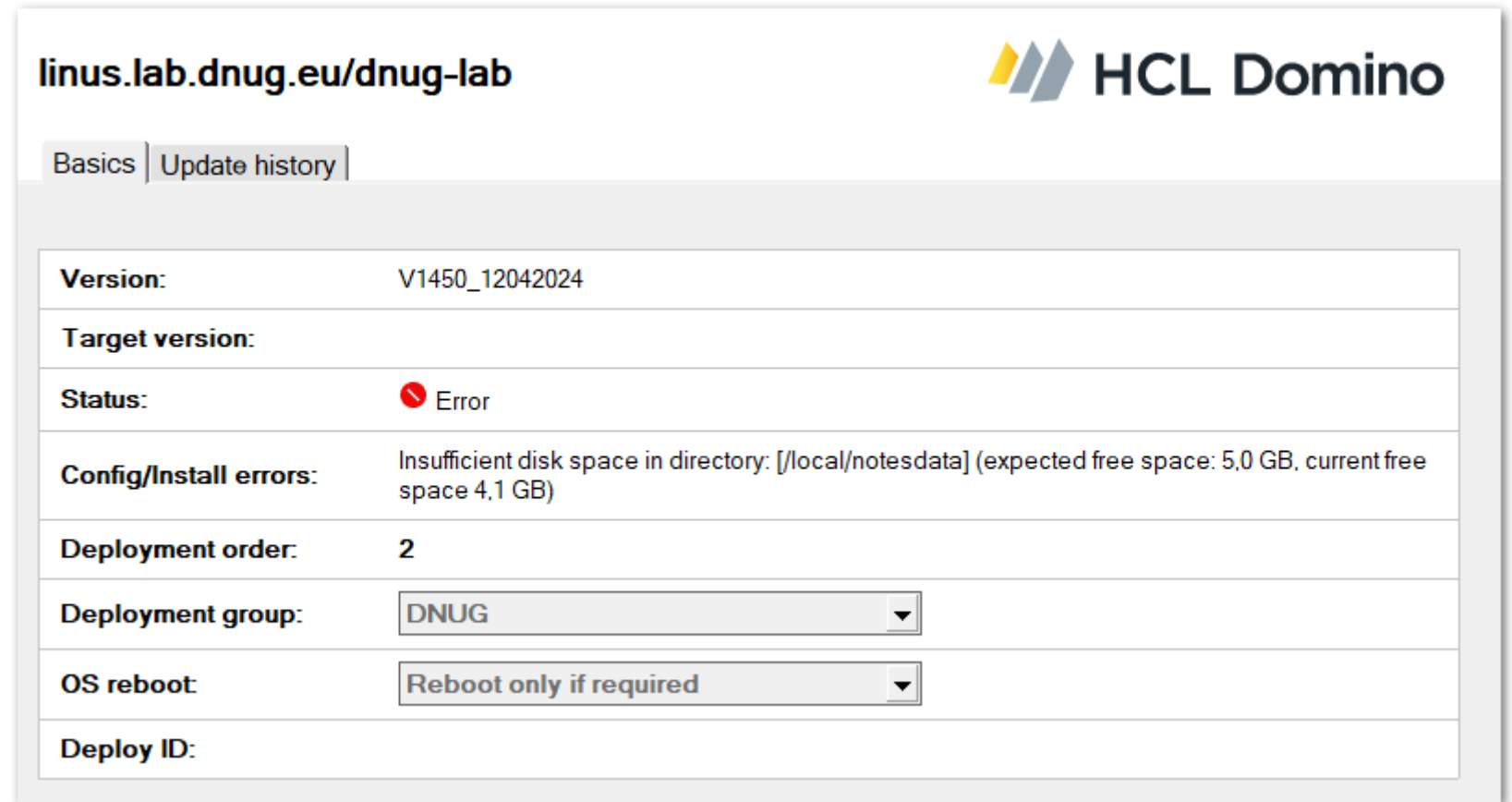
- Admin must **accept license agreements** in My HCLSoftware portal first
 - Per company and product group for each new software license
 - UI shows a meaningful error message
- A separate **"API Token"** from My HCLSoftware portal must be used for **each download server**
 - Token is rotated on every download request
 - Another server would rotate the token and make your token invalid

Status:	🚫 Download Error
Error:	There are unaccepted license agreements
Proposed action:	Check your My HCLSoftware Portal account and assure you are authorized to download software.

Version:	V1450_12042024 ★ Latest Version
Status:	🚫 Download Error
Error:	The supplied refresh token has been rotated
Proposed action:	You must use a separate token for each Domino domain - Login to My HCLSoftware Portal, obtain a new API Key, provide to AutoUpdate via Set Download Token.

Free Space Check for Distribute and Install

- Autoupdate first checks
free space for
 - Installations
 - Distributions

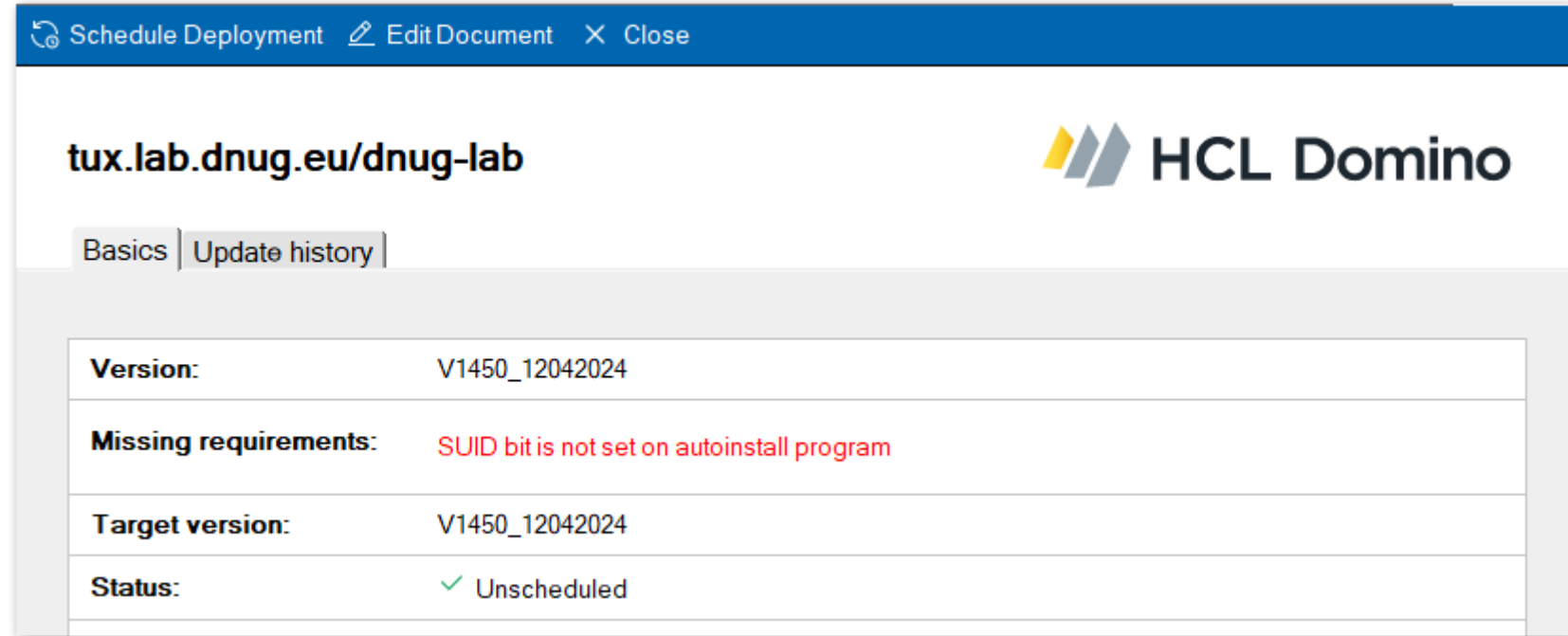


The screenshot shows the HCL Domino configuration interface for the instance 'linus.lab.dnug.eu/dnug-lab'. The 'Basics' tab is selected. The configuration details are as follows:

Version:	V1450_12042024
Target version:	
Status:	❌ Error
Config/Install errors:	Insufficient disk space in directory: [/local/notesdata] (expected free space: 5,0 GB, current free space 4,1 GB)
Deployment order:	2
Deployment group:	DNUG
OS reboot:	Reboot only if required
Deploy ID:	

Linux: SUID Check for autoinstall

- Missing install requirements are regularly checked
 - Let admins know installations would fail
- SUID is required to run with root permissions
- Tip
 - Run `./autoinstall -install` to fix missing SUID



Screenshot of the HCL Domino deployment configuration interface for `tux.lab.dnug.eu/dnug-lab`. The interface shows a table with deployment details:

Version:	V1450_12042024
Missing requirements:	SUID bit is not set on autoinstall program
Target version:	V1450_12042024
Status:	✓ Unscheduled

Windows: AutoInstall Service not running

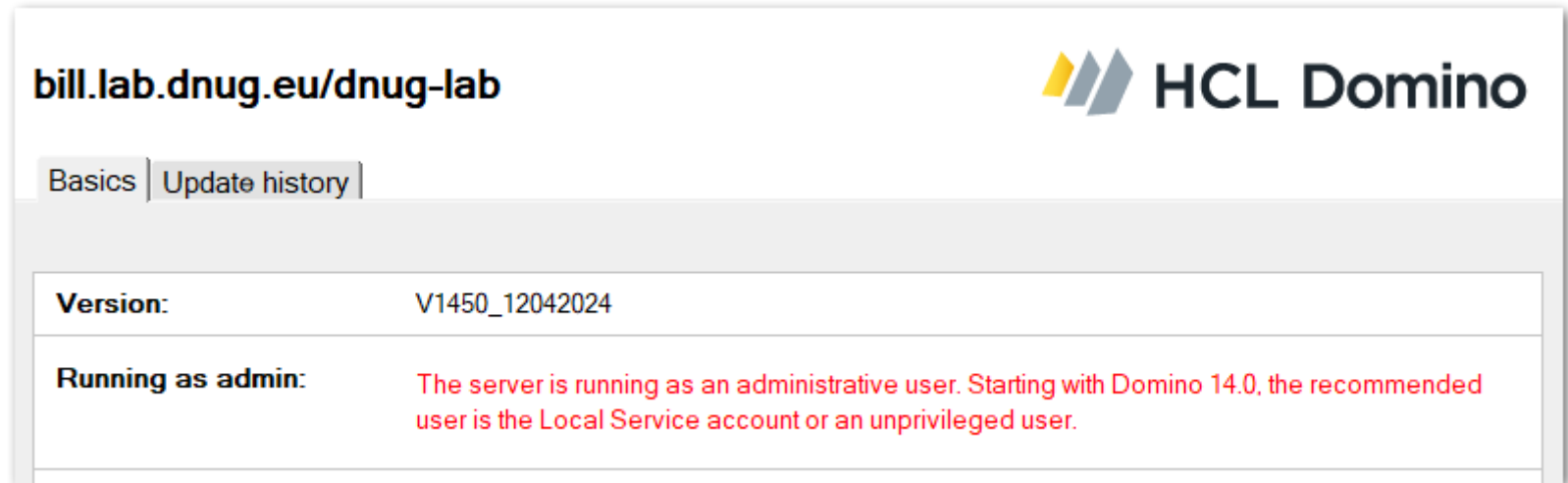
- On Windows the AutoInstall service ensures the installer has admin rights
- The service waits for a request file
 - If the Windows service is not started, installations would wait and don't complete

The screenshot shows the 'Schedule Deployment' window for 'jupiter/NotesLab' in HCL Domino. The window has a blue header with 'Schedule Deployment', 'Edit Document', and 'Close' buttons. Below the header, the title 'jupiter/NotesLab' and the HCL Domino logo are visible. There are two tabs: 'Basics' (selected) and 'Update history'. The main content area displays deployment details in a table-like format:

Version:	14.0FP3IF2 (14.0FP3HF17)
Missing requirements:	autoinstall service (DominoAutoUpdateService) is not running
Running as admin:	The server is running as an administrative user. Starting with Domino 14.0, the recommended user is the Local Service account or an unprivileged user.
Target version:	
Status:	✓ Unscheduled

Windows: Warning if running as Admin

- Since Domino 14.0 it is recommended to run with an unprivileged user
 - When using Domino VSS Backup keep Domino running with an admin account (e.g. system account)
- In any case Domino 14.5 AutoUpdate reports a warning
 - Still allows all type of operations
 - It's just a warning

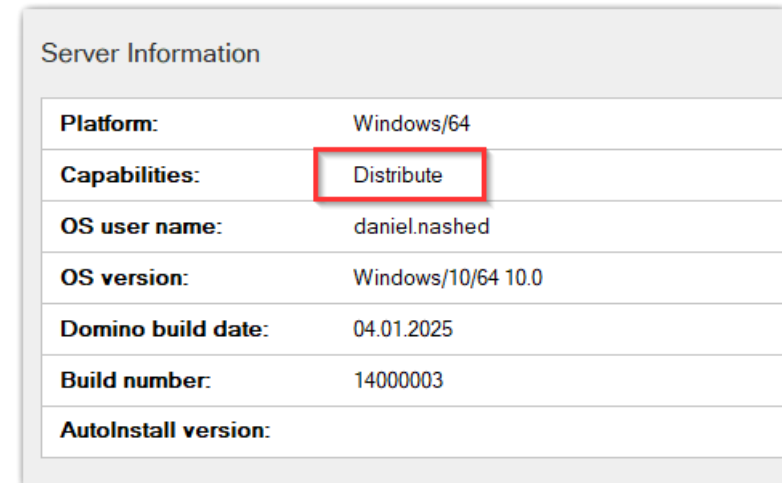


The screenshot shows the HCL Domino administration console for the URL `bill.lab.dnug.eu/dnug-lab`. The page has tabs for "Basics" and "Update history". The "Basics" tab is active, displaying the following information:

Version:	V1450_12042024
Running as admin:	The server is running as an administrative user. Starting with Domino 14.0, the recommended user is the Local Service account or an unprivileged user.

AutoInstall requires to run Domino as a Service

- Domino AutoInstall can only reliably stop and start the Domino server if running as a service
 - In case the server is not running as a service the server capabilities are downgraded to “distribute”

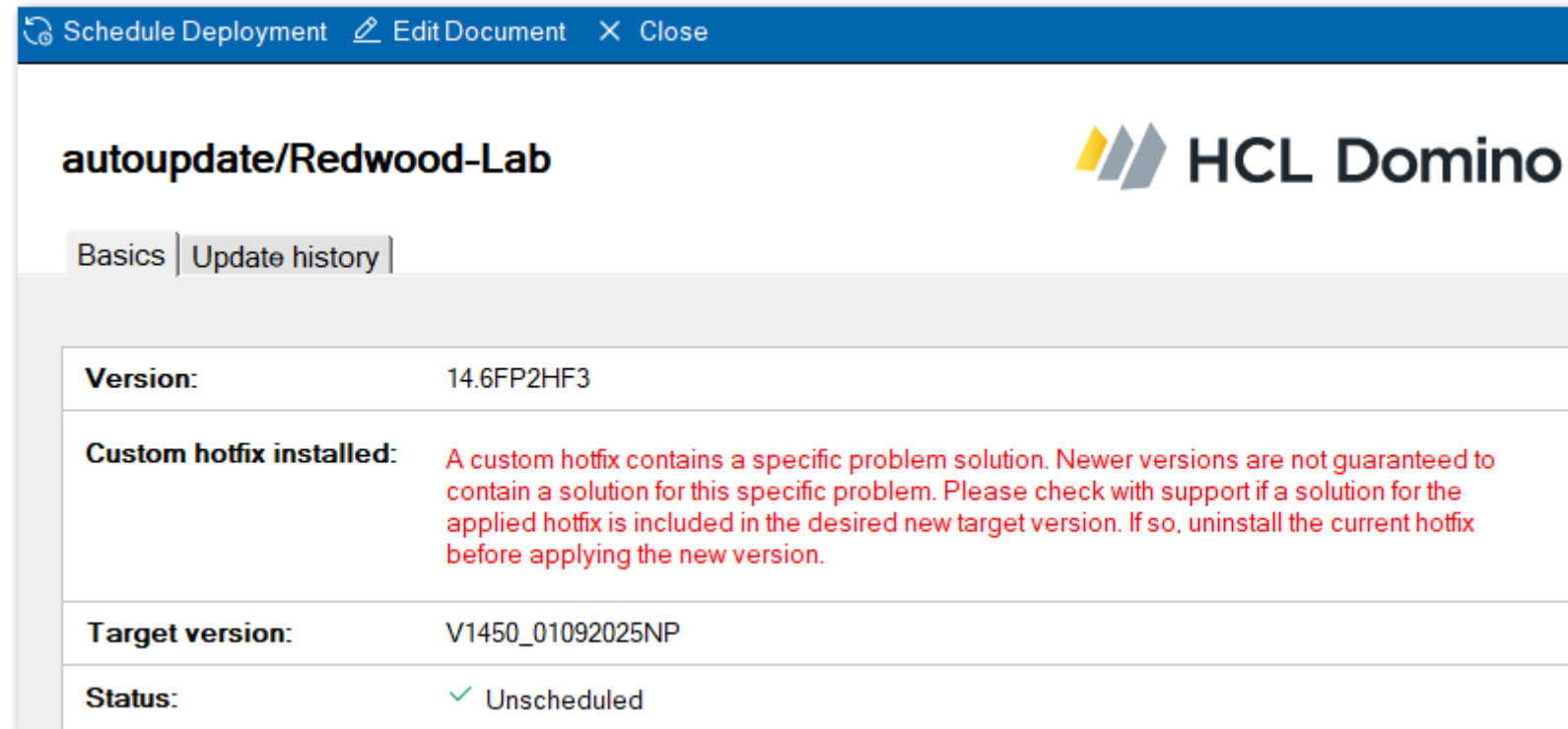


The screenshot shows a 'Server Information' dialog box with the following data:

Server Information	
Platform:	Windows/64
Capabilities:	Distribute
OS user name:	daniel.nashed
OS version:	Windows/10/64 10.0
Domino build date:	04.01.2025
Build number:	14000003
AutoInstall version:	

Domino Hotfixes (HF) requires a manual uninstall

- Hotfixes are detected
 - Interim Fixes are properly mapped
 - Any HF which is not an IF is custom hotfix
- Hotfixes must be manually installed and uninstalled
 - Hotfixes are not part of software.jwt and cannot be verified
 - Keep hotfix installers on the server for manual uninstall
- Interim fixes can be automatically updated



Screenshot of the HCL Domino software configuration window for 'autoupdate/Redwood-Lab'. The window title bar includes 'Schedule Deployment', 'Edit Document', and 'Close'. The main content area shows the following details:

Version:	14.6FP2HF3
Custom hotfix installed:	A custom hotfix contains a specific problem solution. Newer versions are not guaranteed to contain a solution for this specific problem. Please check with support if a solution for the applied hotfix is included in the desired new target version. If so, uninstall the current hotfix before applying the new version.
Target version:	V1450_01092025NP
Status:	✓ Unscheduled

Q & A + Feedback

- Thanks for your interest!
Open questions? Feedback?
- Join us in the Domino Early Access Program (EAP) forum
<https://hclsw.co/domino-14-5-eap-forum>
- Try it out on your own
- Join the AHA portal for feature requests
<https://domino-ideas.hcltechsw.com/ideas>



HCLSoftware

Additional Material



HCLSoftware

Domino Auto Update

AUT Catalog integration



Auto Update Distribute to Notes AUT Catalog

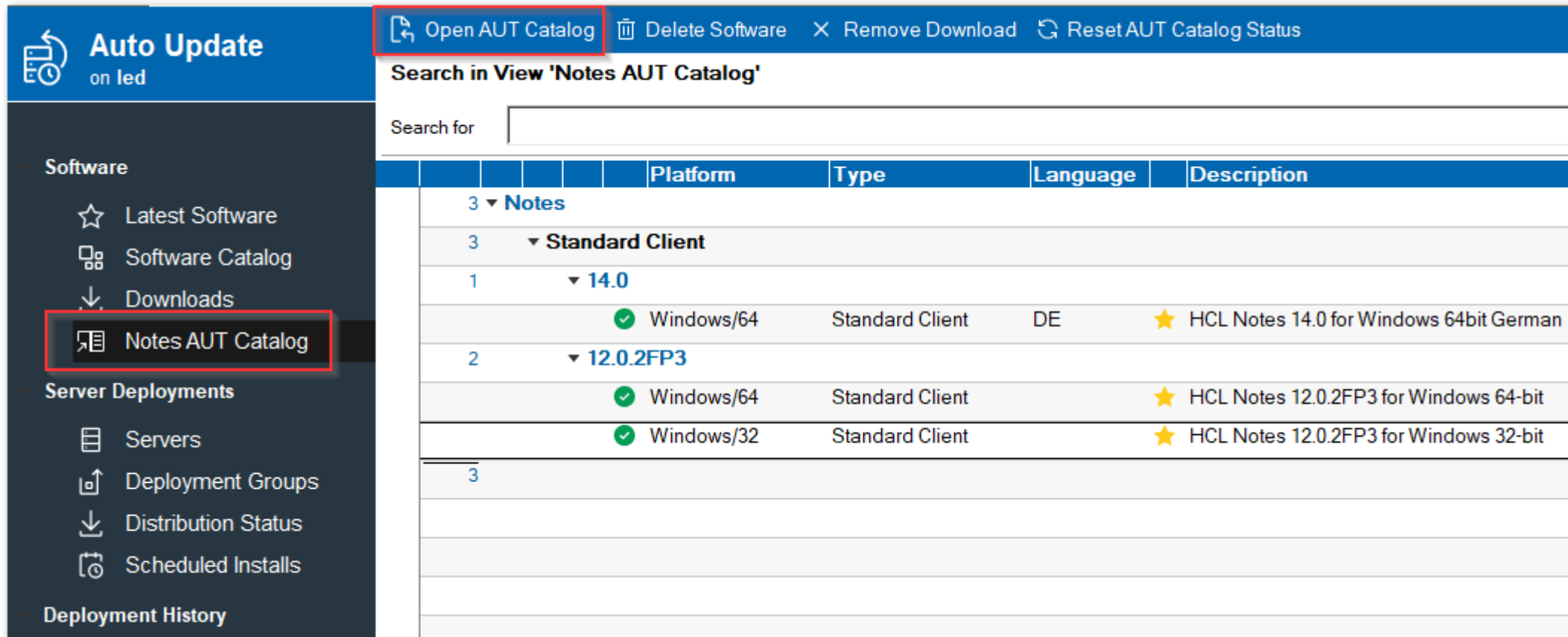
- Domino 14.0 FPI introduces integration between autoupdate.nsf and autcat.nsf
- Once enabled Notes Client WebKits are automatically pushed to autcat.nsf

The screenshot displays two panels from the Domino Admin Console. The 'Proxy Settings' panel on the left includes fields for Proxy URL, User, and Password. The 'Notes Auto Update Catalog' panel below it features an 'Action' dropdown menu set to 'Push Notes Client Software to AUT Catalog' and an 'AUT Catalog server' field. An expanded view of the software catalog is shown on the right, listing various client versions and languages.

▼ Standard Client					
▼ 14.0					
Windows/64	Standard Client	EN	★	HCL Notes 14.0 for Windows 64bit English	
Windows/64	Standard Client	DE	★	HCL Notes 14.0 for Windows 64bit German	
Windows/64	Standard Client	FR,DE,IT,JA	★	HCL Notes 14.0 64bit Multilingual User Interface	
▼ 12.0.2FP3					
Windows/64	Standard Client		★	HCL Notes 12.0.2FP3 for Windows 64-bit	
Windows/32	Standard Client		★	HCL Notes 12.0.2FP3 for Windows 32-bit	

Auto Update Distribute to Notes AUT Catalog

- Software pushed to autcat.nsf are shown in a new view
 - Button to open AUT Catalog



The screenshot shows the 'Auto Update' interface with a sidebar on the left and a main content area. The sidebar has a 'Notes AUT Catalog' button highlighted with a red box. The main content area has a top bar with buttons: 'Open AUT Catalog' (highlighted with a red box), 'Delete Software', 'Remove Download', and 'Reset AUT Catalog Status'. Below the top bar is a search bar and a table of software items.

	Platform	Type	Language	Description
3	Notes			
3	Standard Client			
1	14.0			
	Windows/64	Standard Client	DE	★ HCL Notes 14.0 for Windows 64bit German
2	12.0.2FP3			
	Windows/64	Standard Client		★ HCL Notes 12.0.2FP3 for Windows 64-bit
	Windows/32	Standard Client		★ HCL Notes 12.0.2FP3 for Windows 32-bit
3				

Notes AUT Catalog

- Some Notes Client WebKits are pushed as multiple AUT Catalog documents
 - Standard Client Fixpack is used for Admin/Design (All Client) and Standard Client
 - 64bit and 32bit to 64bit installers are two separate WebKits
- Auto Update takes care of pushing the Software accordingly

AUT Catalog on led/Redwood-Lab

other servers:
None (single server AUT site)

- Version Paths
- Files
- Version Maps
- Setup
 - Setup Screen
 - Product Definitions

New Version Path Import Manifest Deploy Files Delete

Product	Platform	Language	From version	To version	Note
▼ notes					
▼ StandardAllClient-Win64					
		English	V1202*	V1202FP3_01082024	
▼ StandardNotesClient-Win32					
		English	V1202*	V1202FP3_01082024	
▼ StandardNotesClient-Win64					
		English	V1202*	V1202FP3_01082024	
			*	V1400_11092023	German / StandardNotesClient-Win64