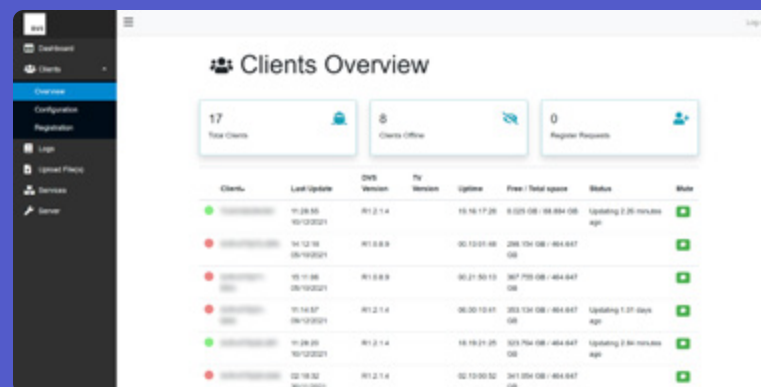
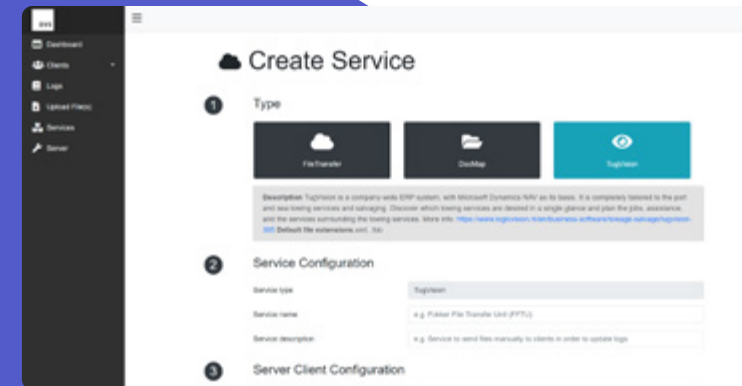


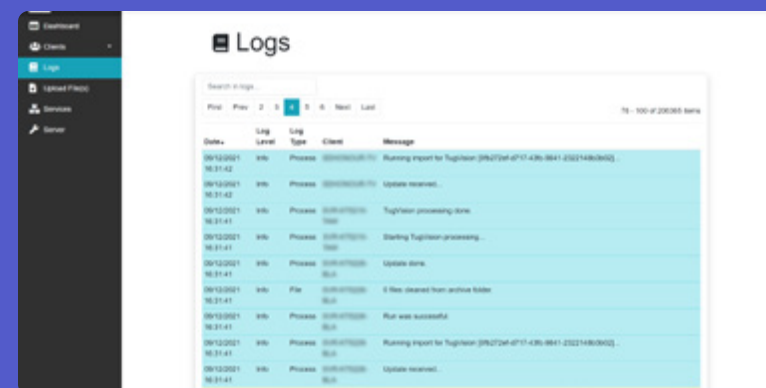
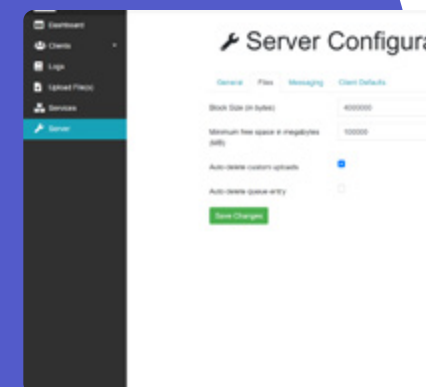
# DVS

Dynamic Vessel Sync



The 'Clients Overview' dashboard shows 17 total clients. It includes a table with columns for Client, Last Update, DVS Version, TV Version, Update, Free / Total space, Status, and Wipe. The table contains 8 rows of client data.

Client	Last Update	DVS Version	TV Version	Update	Free / Total space	Status	Wipe
Client 1	11:28:55 10/12/2021	W1.2.1.4		15:15:17:20	0.026 GB / 98.884 GB	Updating 2.26 minutes ago	+
Client 2	14:12:16 08/10/2021	W1.0.0.9		00:13:01:40	286.126 GB / 484.847 GB	OK	+
Client 3	15:11:06 08/10/2021	W1.0.0.9		00:21:50:10	367.709 GB / 484.847 GB	OK	+
Client 4	11:14:57 08/10/2021	W1.2.1.4		00:30:10:41	353.134 GB / 484.847 GB	Updating 1.07 days ago	+
Client 5	11:28:55 10/12/2021	W1.2.1.4		15:15:21:25	123.754 GB / 484.847 GB	Updating 2.84 minutes ago	+
Client 6	02:18:32 08/11/2021	W1.2.1.4		02:13:00:52	341.054 GB / 484.847 GB	OK	+



The 'Logs' interface shows a list of log entries with columns for Date, Log Level, Log Type, Client, and Message. The log entries are filtered to show 79 of 20000 items.

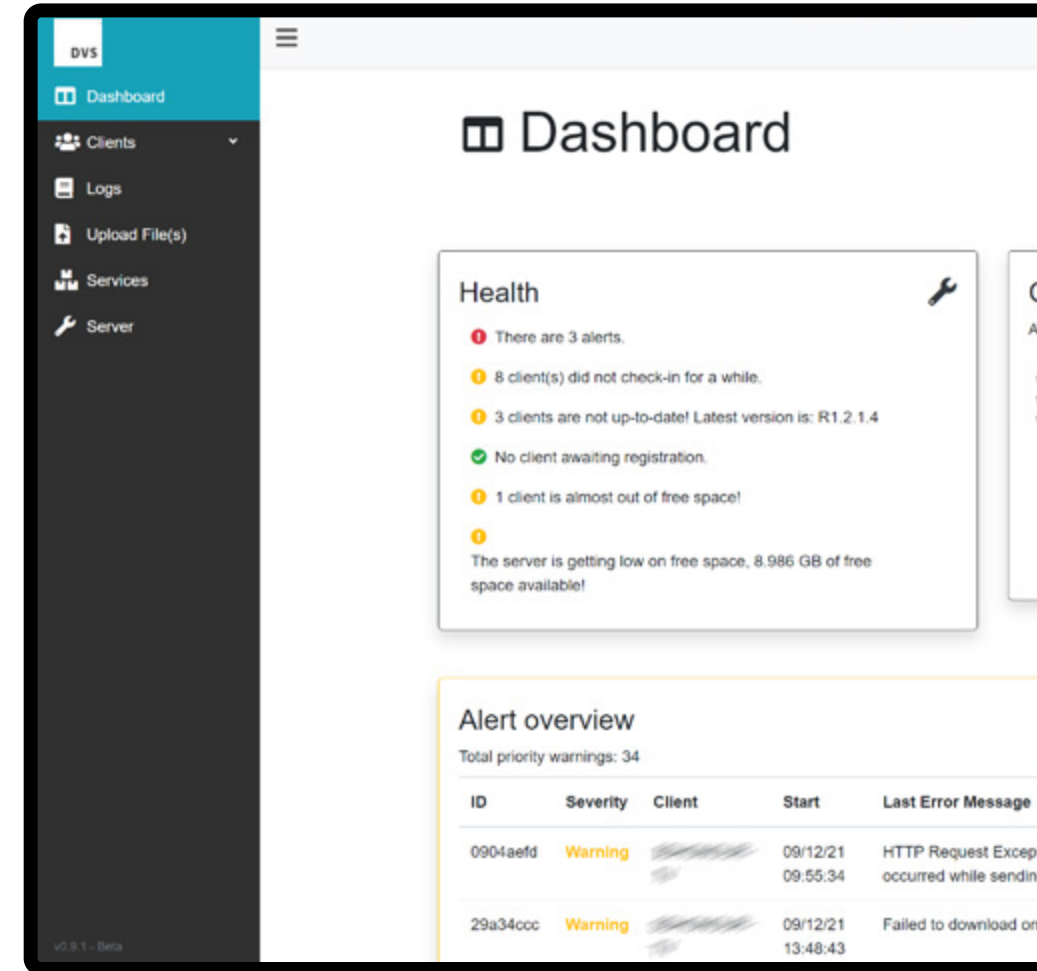
Date	Log Level	Log Type	Client	Message
08/12/2021 16:31:42	Info	Process	0000000000-00	Running report for Tugboat [39273af4f17436-9841-232148b3002]
08/12/2021 16:31:42	Info	Process	0000000000-00	Update received.
08/12/2021 16:31:41	Info	Process	0000000000-00	Tugboat processing done.
08/12/2021 16:31:41	Info	Process	0000000000-00	Done.
08/12/2021 16:31:41	Info	Process	0000000000-00	Starting Tugboat processing.
08/12/2021 16:31:41	Info	Process	0000000000-00	Update done.
08/12/2021 16:31:41	Info	File	0000000000-00	0 files cleared from archive folder.
08/12/2021 16:31:41	Info	Process	0000000000-00	Run was successful.
08/12/2021 16:31:41	Info	Process	0000000000-00	Running report for Tugboat [39273af4f17436-9841-232148b3002]
08/12/2021 16:31:41	Info	Process	0000000000-00	Update received.

# What is DVS?

DVS (Dynamic Vessel Sync) is a system for transferring files from A to B in a reliable, secure and insightful manner. It offers broad capabilities for automatic processing of files and updates (think DocMap and Microsoft Dynamics NAV). This includes detailed insight into client traffic, updates, status and availability beyond standard synchronization. What follows is a brief selection of important features.

## How does it work?

DVS functions with a central server and (separate) clients. All synchronization, updates and configuration regarding the clients can be done via a web-interface, making client management trivial. The dashboard shows the current status of all clients at a glance.



Dashboard

Clients

Logs

Upload File(s)

Services

Server

# Dashboard

## Health



- ! There are 3 alerts.
- ! 8 client(s) did not check-in for a while.
- ! 3 clients are not up-to-date! Latest version is: R1.2.1.4
- ✓ No client awaiting registration.
- ! 1 client is almost out of free space!
- !  
The server is getting low on free space, 8.986 GB of free space available!

## Client activity



Activity of the last 24 hours



## Alert overview



Total priority warnings: 34

ID	Severity	Client	Start	Last Error Message
0904aefd	Warning	██████████	09/12/21 09:55:34	HTTP Request Exception. Connection lost? Status Code: Message: An error occurred while sending the request.
29a34ccc	Warning	██████████	09/12/21 13:48:43	Failed to download one or more files, skipping import for this run.

# Services

DVS works on the basis of services. For now, three types of services can be created within DVS, namely FileTransfer, DocMap and TugVision. A service has a configuration and a selection of clients.

Regarding TugVision: Attachments are extracted from the XML files for file transfer optimization, and the files are efficiently compressed in order to save bandwidth. In the future, this service will be extended with SharePoint support, to instantly transfer the attachments to SharePoint.

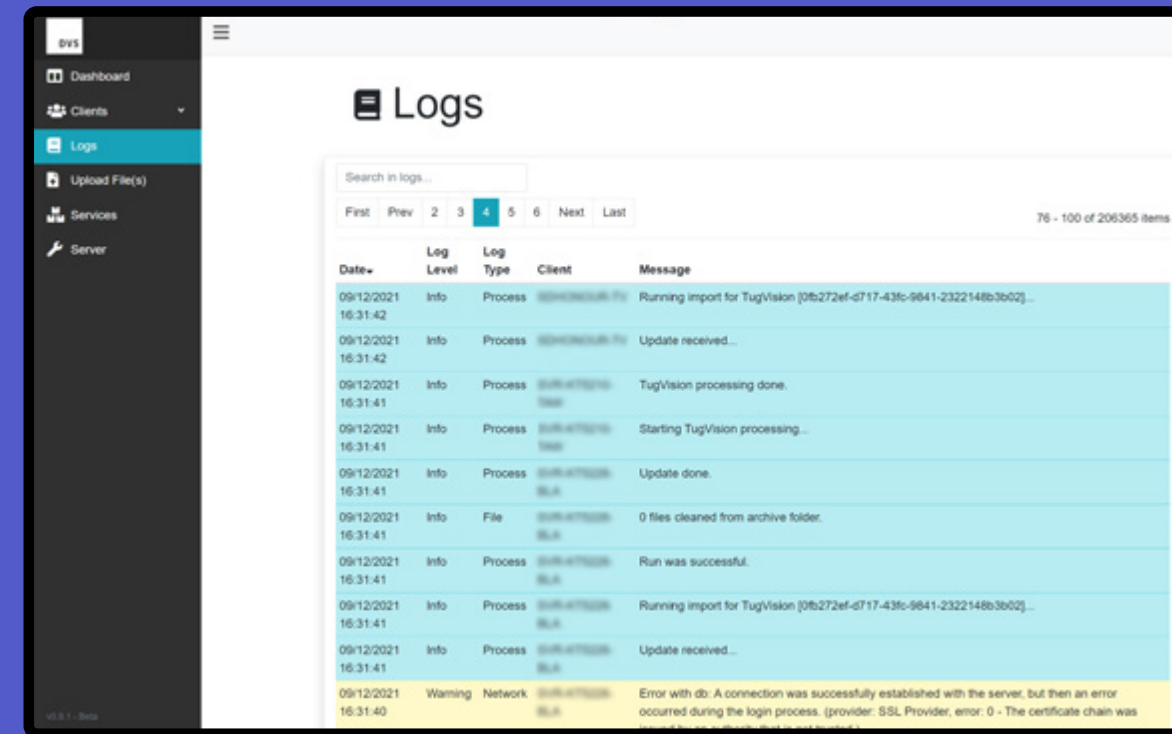
The screenshot displays the 'Create Service' interface in DVS, which is organized into five numbered steps:

- 1 Type:** Three service types are available: FileTransfer, DocMap, and TugVision. TugVision is selected. A description for TugVision is provided: "Description TugVision is a company-wide ERP system, with Microsoft Dynamics NAV as its basis. It is completely tailored to the port and sea towing services and salvaging. Discover which towing services are desired in a single glance and plan the jobs, assistance, and the services surrounding the towing services. More info: <https://www.tugvision.nl/en/business-software/towing-salvage/tugvision-365> Default file extensions: xml, fob".
- 2 Service Configuration:** Fields include Service type (TugVision), Service name (e.g. Fokker File Transfer Unit (FFTU)), and Service description (e.g. Service to send files manually to clients in order to update logs).
- 3 Server Client Configuration:** Fields include Client Server (Search for client...), Use Backups (checked), Days to keep backups (30), and Days to keep archive files (60). A note states: "When not configured further, the 'Service' folder will be used in the root directory." An "Advanced" toggle is visible.
- 4 Client Default Configuration:** Fields include Use Backups (checked), Days to keep backups (30), Dynamics NAV Service Name (DynamicsNAV100), Dynamics NAV Installation Directory (e.g. C:\Program Files (x86)\Microsoft Dynamics NAV\100\Role Tailored Client), Import Code Unit Company Name (FFTU Global), Import Code Unit ID (12345678), TugVision Database Host (localhost), TugVision Database Name (TugVisionOnBoard), and Days to keep archive files (60). A note states: "When not configured further, the 'Service' folder will be used in the root directory." An "Advanced" toggle is visible.
- 5 Additional Features:** Two sections are shown: "All Clients" (selected) and "Custom Client Selection" (Selected: 0); "Use Default Extensions" (selected) and "Custom Extensions" (Add New).

A "Create Service" button is located at the bottom of the form.

# Error and logging

Logging provides extensive insight into what is and was going on with respect to the clients and the server. If there is something going on that has not fixed itself automatically, then a message on the dashboard will indicate what the error messages are, the degree of severity and what can be done about it. Think for example about clients that have been offline for too long, are not yet running the latest version of DVS, or cannot download certain files.



The screenshot displays the 'Logs' section of a DVS dashboard. The interface includes a search bar at the top, a pagination control showing '76 - 100 of 208365 items', and a table of log entries. The table has the following columns: Date, Log Level, Log Type, Client, and Message. The log entries are as follows:

Date	Log Level	Log Type	Client	Message
09/12/2021 16:31:42	Info	Process	[REDACTED]	Running import for TugVision [0fb272ef-d717-43fc-9841-2322148b3b02] ...
09/12/2021 16:31:42	Info	Process	[REDACTED]	Update received...
09/12/2021 16:31:41	Info	Process	[REDACTED]	TugVision processing done.
09/12/2021 16:31:41	Info	Process	[REDACTED]	Starting TugVision processing...
09/12/2021 16:31:41	Info	Process	[REDACTED]	Update done.
09/12/2021 16:31:41	Info	File	[REDACTED]	0 files cleaned from archive folder.
09/12/2021 16:31:41	Info	Process	[REDACTED]	Run was successful.
09/12/2021 16:31:41	Info	Process	[REDACTED]	Running import for TugVision [0fb272ef-d717-43fc-9841-2322148b3b02] ...
09/12/2021 16:31:41	Info	Process	[REDACTED]	Update received...
09/12/2021 16:31:40	Warning	Network	[REDACTED]	Error with db: A connection was successfully established with the server, but then an error occurred during the login process. (provider: SSL Provider, error: 0 - The certificate chain was...

The screenshot shows the DVS application interface. On the left is a sidebar with navigation options: Dashboard, Clients, Logs (highlighted), Upload File(s), Services, and Server. The main content area is titled 'Logs' and features a search bar and pagination controls (First, Prev, 2, 3, 4, 5, 6, Next, Last). Below the search bar is a table of logs with the following columns: Date, Log Level, Log Type, Client, and Message. The table contains several rows of log entries, including information about TugVision imports, updates, and processing. A blue text box is overlaid on the left side of the screenshot, providing context about the logs interface.

Date	Log Level	Log Type	Client	Message
2021-09-12 16:31:42	Info	Process	[REDACTED]	Running import for TugVision [0fb272ef-d717-43fc-9841-2322148b3b02]...
2021-09-12 16:31:42	Info	Process	[REDACTED]	Update received...
2021-09-12 16:31:41	Info	Process	[REDACTED]	TugVision processing done.
2021-09-12 16:31:41	Info	Process	[REDACTED]	Starting TugVision processing...
2021-09-12 16:31:41	Info	Process	[REDACTED]	Update done.
2021-09-12 16:31:41	Info	File	[REDACTED]	0 files cleaned from archive folder.
2021-09-12 16:31:41	Info	Process	[REDACTED]	Run was successful.
2021-09-12 16:31:41	Info	Process	[REDACTED]	Running import for TugVision [0fb272ef-d717-43fc-9841-2322148b3b02]...
2021-09-12 16:31:41	Info	Process	[REDACTED]	Update received...
2021-09-12 16:31:40	Warning	Network	[REDACTED]	Error with db: A connection was successfully established with the server, but then an error occurred during the login process. (provider: SSL Provider, error: 0 - The certificate chain was issued by an authority that is not trusted.)

There is also an overview of logs where you can search for specific logs (e.g. when did a client have the last update?) and there is a log overview available per client. When using Microsoft Teams, it is possible to link DVS to a channel in order to send error logs. Logging also has a severity rating; the most important categories are 'info', 'warning' and 'error'.

# Server and clients

DVS includes clients and a server. Clients can theoretically be anything that DVS's client application can run; whether it's a boat, a lunar lander, or a robot vacuum cleaner. Configuration can be set per client, but clients can also get a default from the server.

The screenshot shows the DVS web interface. On the left is a dark sidebar menu with the following items: DVS logo, Dashboard, Clients (with a dropdown arrow), Overview (highlighted in blue), Configuration, Registration, Logs, Upload File(s), Services, and Server. The main content area has a light gray header with a hamburger menu icon and a 'Log out' link. Below the header is the 'Clients Overview' section, which includes three summary cards: '17 Total Clients' with a robot icon, '8 Clients Offline' with a crossed-out robot icon, and '0 Register Requests' with a plus icon. Below the cards is a table with the following columns: Client, Last Update, DVS Version, TV Version, Uptime, Free / Total space, Status, and Mute. The table contains four rows of client data.

Client	Last Update	DVS Version	TV Version	Uptime	Free / Total space	Status	Mute
██████████	11:28:55 10/12/2021	R1.2.1.4		19.16:17:28	8.025 GB / 88.884 GB	Updating 2.26 minutes ago	
██████████	14:12:18 05/10/2021	R1.0.8.9		00.13:01:48	298.154 GB / 464.647 GB		
██████████	15:11:06 05/10/2021	R1.0.8.9		00.21:50:13	367.755 GB / 464.647 GB		
██████████	11:14:57 09/12/2021	R1.2.1.4		06.00:10:41	353.134 GB / 464.647 GB	Updating 1.01 days ago	

## Client XXXXXXXXXX

Affiliated Service	Name	Info
TugVision	TugVision	TugVision

Search in logs...

Date	Log Level	Log Type	Client	Message
10/12/2021 11:30:40	Info	Process	<span style="background-color: #ccc; padding: 2px;">XXXXXXXXXX</span>	TugVision processing done.
10/12/2021 11:30:40	Info	Process	<span style="background-color: #ccc; padding: 2px;">XXXXXXXXXX</span>	Starting TugVision processing...
10/12/2021 11:30:24	Info	Process	<span style="background-color: #ccc; padding: 2px;">XXXXXXXXXX</span>	Update done.
10/12/2021 11:30:24	Info	File	<span style="background-color: #ccc; padding: 2px;">XXXXXXXXXX</span>	0 files cleaned from archive folder.
10/12/2021 11:30:24	Info	Process	<span style="background-color: #ccc; padding: 2px;">XXXXXXXXXX</span>	Run was successful.
10/12/2021 11:30:24	Info	Process	<span style="background-color: #ccc; padding: 2px;">XXXXXXXXXX</span>	Running import for TugVision [0fb272ef-d717-43fc-9841-2322148b3b02]...



# Management and configuration

DVS also offers the option of managing clients centrally. Files can be uploaded to one or more clients. If this file has a .msi or a .fob extension, DVS automatically gives the option to send the file as an update. In addition, services can be changed or paused in order to modify current processes. A multitude of options can be configured within DVS.

## General

- Define an offline warning timeout

## Files

- Block size (in bytes)
- Minimum free space
- Auto delete custom uploads (checkbox)
- Auto delete queue entry (checkbox)

## Messaging

- Teams Webhook
- Minimum log level to send log

## Client Defaults

- Default Root
- TimeOut check

# Features

The following is a brief overview of the main features of DVS:

## Integration

- Microsoft Dynamics support
  - Auto FOB import; Code Unit invoking; Compression; Encoding Conversion; AzureAD SSO support.
- Microsoft Teams notification integration
- E-mail notifications
- DocMap support

## Security and Accessibility

- SSL
- Silent remote manageable client
- File integrity verification
- File Compression

## Management

- Offline & online clients
- Logging for server and clients
- Central control for all clients
- Automatic solving of errors; generated advice for manual solutions.
- Auto clean-up
- Auto registration
- Offline notifications
- Continuation of downloads and uploads
- Archiving
- Custom file upload with queue and file manager
- Client Uptime, Free Space and Total Space
- Default configuration for clients
- 'Mute clients' to reduce irrelevant logging

# Planned features<sup>2022</sup>

SharePoint as an extension

Dashboard customization

More configuration for FOB-imports

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