

# FileRunner

From Sohonet wiki

Support > Hub > **FileRunner**

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## Overview

FileRunner is a service offered through the Sohonet Hub to allow our users to transfer data between multiple users

It replaces a product with the same name that was based on Signiant Media Shuttle. The old Filerunner has been fully retired.

To send data using FileRunner, a user must have been added to a FileRunner Contract. A user can have permission to access multiple contracts and can receive content from users under any other contract.

Depending on the settings applied to a contract, users can send packages within groups or to any other user under their contract, or even to any email address by manually adding an ad-hoc recipient.

Notifications of uploads, downloads and packages are sent to users via email. They are sent via SendGrid (<https://sendgrid.com/>) (creds in password keeper). If a user unsubscribes from the notification emails you can restore them by logging into SendGrid and removing their email from the Unsubscribed group.

Ad-hoc recipients (those who don't have a Hub login) get access to a one time page to receive/download packages.

## Introductory Material

An introductory document containing an overview of the information required to effectively support FileRunner is here (<https://drive.google.com/open?id=1ajtPtB2xc8mVaAaNKTxkVSkf7QmXbo4yAZkmdGngHnQ>), this document also contains a few simple tasks that can be performed on the hub-staging (<https://hub-staging.dev.sohonet.com>) test deployment to help with familiarisation.

We also have a recorded presentation ([https://lon-proxy-03.storagesvc.sohonet.com/v1/AUTH\\_bc8242fea43146a7b8cee34a40f328e0/training-material/FileRunner%20Support%20Training%20-%20Deep%20Dive%2C%20Groups%20and%20Contracts%20-%20Recorded%20Session.mp4?temp\\_url\\_sig=e0ed595768e52ce2a2f9876e4a805b71395fdd81&temp\\_url\\_expires=7811218225](https://lon-proxy-03.storagesvc.sohonet.com/v1/AUTH_bc8242fea43146a7b8cee34a40f328e0/training-material/FileRunner%20Support%20Training%20-%20Deep%20Dive%2C%20Groups%20and%20Contracts%20-%20Recorded%20Session.mp4?temp_url_sig=e0ed595768e52ce2a2f9876e4a805b71395fdd81&temp_url_expires=7811218225)) explaining the relationships between the various FileRunner elements that you can see in the admin view, along with the slides (<https://drive.google.com/open?id=1gUfO9ZaEKCRmNTSGPg0V7vAeNPjp-3nJI8YiZokz6NI>) used in the presentation. (Training, Video)

## Training

Training materials are stored in the FileRunner folder on the Training Team Google Drive (<https://drive.google.com/drive/u/0/folders/0BzkcFk93oQXtWUlmS2JINjh0b0E?ths=true>).

### Selectable Storage Location

- Author: Tom Viner - 24 Nov 2017
- Description: Training for enabling Selectable Storage Location per client
- Video: [https://drive.google.com/a/sohonet.com/file/d/1KMH8sWMfEP\\_y1yUbQ6uYH50x4V9VRrU/view?usp=sharing](https://drive.google.com/a/sohonet.com/file/d/1KMH8sWMfEP_y1yUbQ6uYH50x4V9VRrU/view?usp=sharing)
- Slides: <https://docs.google.com/a/sohonet.com/presentation/d/1r2c82YvoxcXmNeGxU0xECOpQJz0g-w-QIUPv6fnUQ0/edit?usp=sharing>

### Extend Package Expiry Time

- Author: Tom Viner - 19 Jan 2018
- Description: Training for enabling Extend Package Expiry Time per client
- Video: [https://drive.google.com/a/sohonet.com/file/d/1\\_WgmNXw-aoXaJoDJFgTXvQP3LIENV5Mg/view?usp=sharing](https://drive.google.com/a/sohonet.com/file/d/1_WgmNXw-aoXaJoDJFgTXvQP3LIENV5Mg/view?usp=sharing)
- Slides: <https://docs.google.com/a/sohonet.com/presentation/d/1a-4x20uW-KesYHfLNCrSAJcJHJhDxiGURoO14O9JoA/edit?usp=sharing>

## FileRunner Product Tiers

Please see the following folder to view information about the different FileRunner Tiers

<https://drive.google.com/drive/folders/0B8-yCDs8LYDBQ1NQai1uWZBUUE?usp=sharing>

- Sprint
- Basic
- Professional
- Enterprise

## Terminology

**Sent Package** - This is an object created during package creation and is related to many received packages

**Received Package** - This is an object created for each recipient in the Sent Package,

**On Net Transfer** - A transfer made when the user's IP mapped onto an IP in our IP prefix list

**Off Net Transfer** - A transfer made when the user's IP **DID NOT** map onto an IP in our ip prefix list

**Storage Location** - This is the destination of the Sohonet Swift Cluster that the files where uploaded to.

## Hub Customer Web Front End

### Browser Support

- Best Upload - Recent 64bit build of Chrome or Firefox - we always test against the latest released version
- Best Download - Recommend using Firefox with DownThemAll plugin installed if the customer wants to improve download speeds. See "Filerunner Firefox Download Acceleration" (<https://docs.google.com/a/sohonet.com/document/d/1m1IHsNJRq6nPyfGHUAZE88iTjBtVHNPYLydRv2aVxZ4/edit?usp=sharing>) for instructions how to do this.
- Other recent browsers do work but changing browser can be a good way to eliminate issues.

### Create Package

Allows a user to choose

- Recipients/Add Ad-hoc recipient by email address
- Subject
- Message
- Set of Files or Folders (Folders are supported on Chrome and Firefox only)

When a user submits a package this becomes a **Sent Package**. For each user in the recipients list a **Received Package** is created.

### Received Packages

Allows a user to see a list of packages they have received, and download them.

### Sent Packages

Allows a user to see a list of packages they have sent.

### Usage Reports (FileRunner2 Admin only)

Allows a FileRunner admin to see

- Number of transfers on-net and off-net
- Number of bytes transferred on-net and off-net
- A list of all packages sent under their contract
- Uploads and downloads or packages
- Speed of upload and download
- Storage Usage

### Billing (FileRunner2 Admin only)

Allows a FileRunner admin to see

- Cost of current Storage Usage
- Cost of number off-net and on-net transfers
- Estimated bill including any discounts

### User Management (FileRunner2 Admin only)

Allows a FileRunner admin to:

- See a list of current users and their permissions/groups
- Edit Permissions/ Disable and Enable Users
- Add New Users
- Create User Groups (see FileRunner User Groups) and add users to Groups

## User Management - Delete User from FileRunner Account (FileRunner2 Admin Only)

Allows a FileRunner Admin to :

- Remove Internal or External user from FileRunner Contract
- Re-add Internal or External user to SAME FileRunner Contract
- Add User who has been deleted from a different Contract to a new contract (as EXTERNAL only)

Debug: Can't add user as external as email already associated

- check if they are trying to add User as Internal (must be added as external if Hub User was previously used on another contract)
- check if they are still on a FileRunner contract (can't be on two contracts safely)
- check if they're still named in a FileRunner Group on admin/filerunner2/filerunner2mastermember/ or <https://hub.alpha.sohonet.internal/admin/filerunner2/filerunner2usergroupmembership/>

## FileRunner User Groups

User Groups is an optional feature of FileRunner allowing Admins to set up sub-groups under their FileRunner contract which restrict who a user is allowed to send and receive content from.

Users in the Master Group can send and receive content from everyone in the contract. Users added to a sub-group can only send and receive content from other users in their groups or in the Master Group. For existing FileRunner contracts who are not using the groups feature all users will be in a master group by default.

## FileRunner Pin Verify

Pin Verify allows additional Security to sent packages where when a user tries to download a package they get sent a code to their mobile number which they must enter to be able to download their package/

Allows a FileRunner admin to:

- Force Pin Verify to be used on all sent packages
- Force Pin Verify to be used when sending to Ad-hoc (email addresses which aren't registered as Hub users)

Allows a FileRunner User to: If not forced globally by Admin, set Pin Verify on a specific package for extra security Override the blank or stored Mobile Number on Recipient Profile if they know there is a better number to use

Useful Info:

- PIN is request at point of download by Package Recipient
- PIN is only active for 15 minutes from request
- Currently mobile/cell number is locked to package and can't be changed

## Customer can't download package with Pin Verify

- **DO NOT** give caller any cell/mobile numbers related to packages (confirm numbers user gives you as YES/NO or advise what number it could be by last 3 digits)
- **DO NOT** give caller package PIN from Twilio
- Ask User if text message time was delayed/hasn't been received and how long they have been waiting
- If you are talking to Package recipient, ask them to request new Pin from their Received Package page (PIN is only valid for 15 minutes after request)
- If reasonable see if they could ask the sender to quickly re-upload

Debug:

- Check package was uploaded successfully (Both URLs will work Post Version 5 Release)
  - <https://hub.sohonet.com/admin/applications/applicationpackage/>
  - <https://admin.fr.sohonet.com/admin/applications/applicationpackage/>
- Check package if package used pin verify and if there is a phone number and Twilio status: Sent/Received Packages > Package Name > Packages (e.g. <https://hub.sohonet.com/admin/applications/applicationuserpackage/1146/>)
- Confirm number package was sent to is correct number and is mobile/cell or other text enabled phone, if number incorrect Sender must resent package with correct mobile/cell number
- Check carriersupport@sohonet.com for any errors reported from Twilio
- Check Twilio status page: <http://status.twilio.com/> (confirm all states 'Operational')

IF PACKAGE HAS BEEN LOCKED:

- If a User enters an invalid pin 5 times, the package will be locked and they will not be able to generate a new pin.
- Best practice requires us to leave packages in a locked state unless we have permission from the \*sender\* to unlock it.
- You can unlock the package by finding the package in the received packages list in Django Admin (the table view, not the received package detail page). Check the box next to the package and find the 'Actions' dropdown at the top of the table. Select 'Unlock package and flush cache' from the dropdown list.
- The recipient will need to refresh the received package page but will be able to generate a new pin.

**IF PACKAGE HAS BEEN SENT TO THE WRONG NUMBER:**

- We should not edit or update the phone number once a package has been sent.
- The sender can login and go to the sent package page to change the number for this package.

- Login in to Support Twilio to check status, password in password server: <https://www.twilio.com/user/account/voice/dashboard>

Go to: User account (top right corner) > Subaccounts > filerunner Then: Products > Programmable SMS

- Use troubleshoot: <https://www.twilio.com/help/faq/sms/how-can-i-troubleshoot-if-an-sms-message-sent-from-twilio-didnt-arrive>
- Ask user to request new PIN on FileRunner, and see if this appears in Twilio Logs
- Raise issue with Twilio if it problem seems to break SLA with Twilio
- If problem doesn't appear to be due to Twilio contact dev@sohonet.com with Package ID, time pin was requested and wait time incurred.
- Request that Sender Re-sends the package (with/or without pin verify at their discretion) and advise we will keep looking in to the issue and respond when we have found the cause.
- LAST RESORT: If still an issue and Package and re-uploading is not possible (e.g. time sensitive and package size is large) contact dev@sohonet.com

## FileRunner Auto-Downloader

A separate software package that runs on a user's machine, automatically polling the hub for new packages and downloading them to a configured place on the user's machine. The software is currently only available for OS X and is distributed as an installable pkg file to selected customers. We have not yet made this software generally available.

It runs as a system service and presents an interface through a web browser to show the progress of downloads.

See FileRunner\_Auto\_Downloader

## FileRunner CLI

CLI Interface for FileRunner

FileRunner CLI

## Releases

FileRunner Releases (<https://sites.google.com/sohonet.com/product-central/filerunner/releases>)

## Admin and Support

Troubleshooting can be split into the following Categories:

- General - Please see General
- Client/Browser - Please see Client & Browser
- Auto-Downloader - Please see Auto-Downloader
- Core Application (Hub) - Please see Hub Application Issues
- Connectivity - Please Follow Standard Connectivity Debugging Procedures (<https://sohonet.github.io/js-latency/>)

Support User Guide - <https://hub.sohonet.com/admin/filerunner2support/>

## General

- Obtain the customers username for the hub or receiving email.
- Use the user guide to assist the end users
- Use tools / pages on the admin hub under File Runner if they have an issue. Use the pages listed below
  - FileRunner Reporting - Statistics for overall contract
  - FileRunner Download Activity Logs - Download activity log, good for checking the status of a download
  - FileRunner Files - Files within Packages
  - FileRunner Permissions - Permissions give a user access to a contract and control whether they can send, receive or administer.
  - FileRunner Groups - Contracts are bound to Groups. A Group is where the content is sent to be stored
  - FileRunner Received Packages - Status of received packages, this is the place to go
  - FileRunner Sent Packages - Sent Packages Status
  - FileRunner Storage Locations
  - FileRunner Test Packages
  - FileRunner Upload Activity Logs
  - FileRunner Uploaders
  - FileRunner Users
  - FileRunner Support Guide

- FileRunner Support User Map

## FileRunner Nightly Tests

There is a deployment of the filerunner-testing project (<https://github.com/sohonet/filerunner-testing>) on XN-XSVM-S-49-LDP12-GB that runs a simple test suite nightly to verify FileRunner functionality and verify upload/download.

All code runs as the 'filerunner-test' user from that user's crontab using 'pew' (<https://github.com/berdario/pew>). The test sends 3 packages (a single small file, a single large file, and a multi-file package). See the README in GitHub for more details.

Any errors will generate alarms via Sensu.

Results are uploaded to Elasticsearch with the index filerunner\_testing\_<year>-<month>, and the full results of each test run along with logs are uploaded to the Sohonet FileStore account into the 'filerunner-test-results' container.

## Generating Manual Reports

There is a selection of reporting files that can be manually triggered. If an automated report fails and a report is needed for a given date. Follow the list below in order to trigger these:

- 
- USERNAME@193.203.94.106 SSH onto one of the production web nodes
  - Log in as hub `sudo su hub --login` and enter your password. (This is because the hub environment variables are set for this user)
  - `cd /opt/sohonet/repository` (go to hub directory root)
  - `python manage.py filerunner2_total_usage_report --date_from=01/03/2022 --date_to=30/03/2022` (change to desired dates. Last time the date\_from didn't quite work so experiment with formatting. This also takes 40 mins + when querying a month)
  - `mv /tmp/total-usage-report_M_vG2h30-Mar-2022-13-57-40.zip ~USERNAME/` (Move the report to your local user, not the root user. This is needed to rsync to a local machine)
  - `chown USERNAME ~USERNAME/total-usage-report_M_vG2h30-Mar-2022-13-57-40.zip` (Provide permissions to local user from root)
  - `exit` (Return to local user)
  - `exit` (Return to local terminal)
  - `rsync -chavzP --stats USERNAME@193.203.94.106:total-usage-report_M_vG2h30-Mar-2022-13-57-40.zip /Users/USER/Desktop` (Replace '/Users/USER/Desktop' with desired path you want the file on your local machine)

## Exporting a list of active users

There's a Django management command for that. The source code can be found [here](https://github.com/sohonet/hub.sohonet.com/blob/staging/hub/core/management/commands/active_user_list_csv.py) ([https://github.com/sohonet/hub.sohonet.com/blob/staging/hub/core/management/commands/active\\_user\\_list\\_csv.py](https://github.com/sohonet/hub.sohonet.com/blob/staging/hub/core/management/commands/active_user_list_csv.py)).

A list of production web nodes can be found [here](https://github.com/sohonet/hub.sohonet.com/blob/staging/DEPLOYMENT.md#useful-ssh-config) (<https://github.com/sohonet/hub.sohonet.com/blob/staging/DEPLOYMENT.md#useful-ssh-config>).

These are the steps:

```
ssh <PRODUCTION_WEB_NODE>
sudo -i

docker exec -it hub_hub bash
cd /app
python ./manage.py active_user_list_csv --email-recipient <EMAIL_ADDRESS>@sohonet.com
```

## FileRunner Upload Triage

Try to obtain as much of the following information when triaging a filerunner issue.

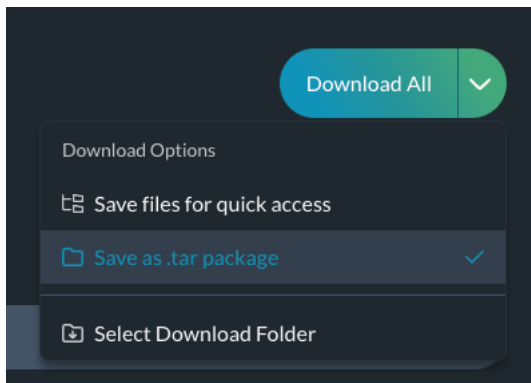
- Determine what version of FileRunner the user was using
  - FileRunner 2 - <https://hub.sohonet.com>
  - FileRunner 5 - <https://fr.sohonet.com>
  - If you only have a package name, the version of a FileRunner Package is listed in the "Sent Package Page" you can see a V5 or V2 column.
- Obtain a HAR file
  - Chrome - <https://support.google.com/admanager/answer/10358597?hl=en>
  - FireFox - <https://support.zendesk.com/hc/en-us/articles/4408828867098-Generating-a-HAR-file-for-troubleshooting->

## Optimised Download Triage

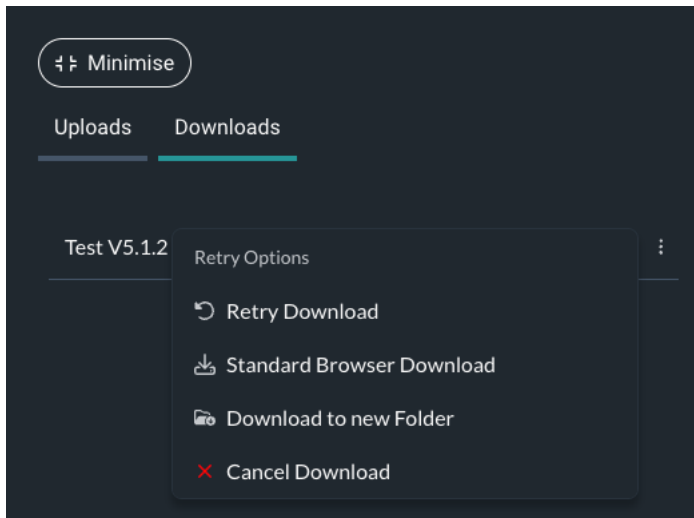
If users are having consistent download problems, get them to download using the <https://fr.sohonet.com/debug/download> page and send us the results.

Support guide for the tool is located [here](https://admin.fr.sohonet.com/admin/docs/guides/DebugPage/#using-the-debug-tools-for-support) <https://admin.fr.sohonet.com/admin/docs/guides/DebugPage/#using-the-debug-tools-for-support> (VPN required)

- Always advise user to use the latest version of Chrome for Optimised Download
- If a user is having issues when extracting a package using Optimised Download they should first try download using the "Save as .tar package" which is available from the "Download All" context menu



- If the Optimised Download is still failing they should use the "Standard Browser Download" from the context menu in the downloads sidebar



- There can be issues downloading to external drives or NAS storage, users can try to downloading to a different folder to see if that helps.
- If a user wants to toggle on/off the "Optimised Download" feature they can do with the shortcut "ALT-SHIFT-P"

## Gather General Information

- Operating system
- Browser Version
- Screenshots of any errors
- Obtain output from clients console on browser (<http://webmasters.stackexchange.com/questions/8525/how-to-open-the-javascript-console-in-different-browsers>)

The browser logs that are required can be found by doing the following when an issue occurs.  
 Chrome  
 Opening the "Console" panel of Chrome's DevTools:  
 Windows and Linux: Ctrl + Shift + J  
 Mac OS: Cmd + Opt + J  
 Right click in the console and choose Save As.  
 It would also be useful to include any package names/links, and any indication of when this last happened.

- Username or email of uploader/Username or email of recipients
- It is useful to also obtain links to the packages from the Django Admin interface
- How were files attached to uploading machine - ie. NAS/mounted drives etc.
- Network information - SMN or Internet
- Application / End Device Protection Installed

## Console Debug Commands for FileRunner V2

```
uploader = window.fr2.filerunner_uploaders[0]
console.table(uploader._files_failed)
console.table(uploader._files_in_progress)
console.table(uploader._files_retrying.values())
```

Note: Debug for FileRunner V5 is sent to Sentry

## FAQ

**Q:** What are the supported browsers?

- **A** Uploading - recommend Chrome
- **B** Downloading - recommend Chrome with Optimized Download, if that is not possible then recommend FireFox with DownloadThemAll plugin
- **C** Most up to date browsers will work, if a user is having issues, changing browser can help to eliminate the browser as an issue.

**Q:** Can a customer add user xxxx@yyyy.com as an external user on their FileRunner account if they are already setup on another FileRunner account?

- **A** Yes, the existing FileRunner user will receive a notification that they have been added to another contract and the new contract will appear in the FileRunner sidebar.

**Q:** Can users exist on two different contracts?

- **A** Yes, see the answer above.

**Q:** Can I upload Directories?

- **A** Yes, but only Chrome is currently supported. This feature will also work in new versions of Firefox, but this has not been fully tested.

**Q:** What happens when I upload multiple files?

- **A** The files are grouped together in a tarball, so that path information can be preserved when uploading directories.

**Q:** How can I see Usage Report, Billing, User Management features?

- **A** You must be a FileRunner Admin for your Company.

**Q:** Can I resume a transfers or navigate away from the page?

- **A** No.

**Q:** Can I set an access period for less than 6 hours?

- **A** No.

**Q:** Can the same file be uploaded multiple times in the same session?

- **A** No, Small files will fail to reload, larger files show as re-uploaded (those uploaded in chunks) but currently that would be any file over 225MB.

**Q:** Where should I send feature requests?

- **A** flora@sohonet.com

**Q:** Can I delete FileRunner users?

- **A:** Users can be deleted by a FileRunner contract admin in the 'User Management' section of the frontend by clicking Edit and pressing 'Delete'.

**Q:** Can I change the timezone Package notifications are displayed in?

- **A:** Timezone can be changed by clicking on the Account dropdown in the top right corner, then 'My Account' then 'Edit Profile'.

## Common Issues

### User Not Receiving Package Notifications

A common cause of this problem is users unsubscribing from the FileRunner emails, to check this follow these steps:

- Log into Sendgrid using the details on the password server
  - On the left hand side, click Suppressions > Global Unsubscribes
  - Search for the email address of the user in here, if it's listed then they have unsubscribed from the emails
  - Select the email address and at the top of the page click the 'settings' icon, then 'Remove Selected Global Unsubscribes'
  - You can also check to see if the emails were sent to the user:
    - Activity > search for email address > check 'Type' for 'Unsubscribe' or 'Drop'
- Check the Message Queue for email delays - <https://hub.sohonet.com/admin/mailer/message/>
  - This queue should be processed every minute, so in general it should be 0 length most of the time
  - If it looks like there is a back up emails this indicates a problem with processing the queue.
  - The emails that have been sent are logged in this page <https://hub.sohonet.com/admin/mailer/messagelog/>
- Log into the Hub Admin
  - Administration > Auth > Users
  - Find and select the email address
  - From 'Action' drop down, select 'Send out activation emails'

The user who sent the package will be able to resend the package download link via their sent package page (Only works if the recipient user is an Ad Hoc user).

Non-Ad Hoc users can log in and download the package from their account.

### Removing an Ad Hoc email address

[https://wiki.sohonet.co.uk/wiki/index.php/FileRunner\\_Remove\\_Ad\\_Hoc\\_User](https://wiki.sohonet.co.uk/wiki/index.php/FileRunner_Remove_Ad_Hoc_User)



## Mismatched/Missing/ Corrupted files after upload

We have had reports that files are going missing or are corrupted after upload. This is potentially a failure in the package upload or package build process.

From the 20th June 2018 we will have the ability to view within the Hub Admin instances where this has occurred.

We are storing a list of files intended to upload by storing the file list at the point the user selects the upload button and performing a diff on this list and the list of files we have stored in swift after the package build process has completed.

In the Sent Packages list view in the Hub Admin, we have added a column for 'Intended matches uploaded'. This column will have one of three indicators: green tick/check for 'files match', a red cross for 'files mismatch' and a grey question mark for 'unknown'. The status unknown will likely indicate that the package has not yet fully uploaded and the check has not yet been carried out.

| SHORT NAME              | OWNER | CONTAINER | PREFIX  | AMOUNT COMPLETE  | FILES   | MBVS | MBV | DURATION | CONNECTION | IP | CREATED                  | STATUS    | INTENDED MATCHES UPLOADED | STOPS |
|-------------------------|-------|-----------|---------|------------------|---------|------|-----|----------|------------|----|--------------------------|-----------|---------------------------|-------|
| test-log-mismatch-files | hub   | sohonet   | 87ecb05 | 0 bytes/327.5 MB | 0/1     |      |     |          |            |    | June 7, 2018, 12:25 p.m. | Not Ready |                           | LON S |
| really-mismatch-file    | hub   | sohonet   | 3d68f80 | 6.7 MB/4.7 MB    | 1/1     |      |     |          |            |    | June 7, 2018, 9:31 a.m.  | Deleted   |                           | LON S |
| musical-files           | hub   | sohonet   | 99531ed | 2.9 MB/2.9 MB    | 701/701 |      |     |          |            |    | June 7, 2018, 9:03 a.m.  | Deleted   | ✓                         | LON S |
| musical-files           | hub   | sohonet   | 8d64d15 | 7 bytes/7 bytes  | 1/1     |      |     |          |            |    | June 7, 2018, 8:54 a.m.  | Deleted   | ✓                         | LON S |

If the package has been flagged as containing a mismatch, you will find extra detail, within the sent package detail view. This will then list any files that were missing, any that mismatched in size and any extra files after upload.

|                                 |   |
|---------------------------------|---|
| Uploaded files match intended?: | ✗   |
| Missing files:                  | path/to/file002.ext<br>path/to/file003.ext<br>path/to/file004.ext   |
| Mismatched sizes:               | 🍏行 — was supposed to be 102.4 KB, is 45.7 KB (56.7 KB difference)<br>asdf001 — was supposed to be 102.4 KB, is 45.7 KB (56.7 KB difference) |
| Extra files:                    | path/to/file005.ext<br>path/to/file006.ext<br>path/to/file007.ext   |

## Ad-hoc Users

Allowing a customer to send to ad-hoc recipients is done on the FileRunner Contract for each customer

- Log into the Hub Admin
  - FileRunner > FileRunner Contracts
  - Select the customer
  - at the bottom of the page there is an option to enable ad-hoc

## Client & Browser

Always obtain the following information from the customer:

- Username
- Email
- Sender
- Recipient
- Package Name
- Operating system
- Version of browser
- Screenshots

If possible obtain:

- Output from clients console on browser

## Download Accelerators

It is for customers who would like to download FileRunner packages faster. It is possible to use standard download managers. See this document for instructions (<https://docs.google.com/a/sohonet.com/document/d/1m1IHsNJRq6nPyfGHUAZE88iTjBtVHNPLYdRv2aVxZ4/edit?usp=sharing>)

## Chrome Parallel Downloading Flag

To improve speeds in chrome you can enable this feature by copying and pasting this line into your address bar.

- `chrome://flags/#chrome-parallel-download` changed to `chrome://flags/#enable-parallel-downloading`

## Filerunner Accelerators

Filerunner Accelerators are servers which act as proxies between distant Swift clusters and end-users downloading files. The Accelerator servers have special TCP tuning applied to increase transfer speeds between geographically remote Swift clusters and the users downloading packages from them. Details at the link below.

Filerunner Accelerators

## Auto-Downloader

Auto-Downloader Link: <https://github.com/sohonet/FileRunner-Auto-Download/releases> **NOT customer accessible - this is a PRIVATE company git repo**

## Installation instructions

### Install

1. Download the DMG file onto the Mac computer you are planning to use.
2. Open the DMG and then select the package to install. ( Right Click, Open With, Installer should be used to install the package with normal security settings on modern macOS ).
3. In certain cases, like writing to a **mounted network drive**, you have to manually give **Full Disk Access** to the `auto_download` executable (`/Users/<username>/Library/FileRunner-Auto-Download/filerunner-autodl/auto_download`).
  1. This happens in recent versions of macOS and it can be done in "System Preferences" --> "Security & Privacy"

### Account Setup

1. Once installed, select Applications , Filerunner, Open Filerunner Auto Download, which will launch your browser on the config screen.
2. In another tab on your browser, login to the Sohonet Hub as the user you want to associate with the Auto-Downloader.
3. Once fully logged in, enter URL <https://fr.sohonet.com/profile> and navigate to API keys
4. Enter a meaningful name in the New API Key section and hit create. Copy the API key generated so your paste buffer.
5. Back on the Auto-Download tab, enter your username ( eg. email) and the API key.
6. If you have a folder in mind for the package downloads, enter it in place of the default. We don't have a picker yet, so navigate to the folder in Finder, right click on the folder icon and then press alt (Option) and then select 'Copy .... as pathname', you can then paste in the full pathname.
7. Once you add the account, it will then download packages that are sent to the linked user.
8. Older packages are not downloaded by default, but you can force them to download if needed.

## Known Issues

Issues relating to Auto-Downloader desktop application.

A lot of issues can be resolved by refreshing the browser page showing the UI or restarting the service.

**Note:** Restarting the service may resolve issues, but it will stop any downloads currently in progress and restart them from the beginning when the service is restarted, so should be a last resort.

The auto downloader package has to be installed on the mac mini's user account. Otherwise, you won't be able to enable the auto downloader.

### Adding An Account Fails

This means that the validation of a user's auth credentials has failed.

- Check that the user has generated and is using an API key and not their password.
  - This could be as simple as asking them - the API key is a 64 character alphanumeric string.
  - Logging into the hub as the user and visiting the [FileRunner settings (<https://hub.sohonet.com/filerunner/settings>)] page will allow you to check that one has been generated.
- Check that the user has logged in with their username and not their email address.

We have seen proxy settings cause issues with the auto-downloader accessing the storage and the hub. If the two above checks are correct and the adding of an account is still failing, please check that the user does not have a very restrictive network setting or an internet proxy in place on the interface they're using. If this is the case they should attempt to use a less restrictive network interface or bypass their proxy settings until we are able to add proxy support to the auto-downloader.

**If the problem is not resolved, please gather diagnostic information as described in Collecting Diagnostic Information and raise an issue with the dev team**

### Auto-Downloader Interface Shows An Odd State

We have seen the case where switching accounts, low memory, or sleep states cause a loaded interface to get into odd states. Odd interface states include multiple tabs for a single account or package downloads showing conflicting state information (e.g. showing cancelled, but the download still appears to be in progress). If this is the case please follow the steps below to attempt to resolve the issue:

- Refresh the browser (the interface is just a web page showing the state of the downloader process!).

If, after refreshing the state, the UI is still in an odd state, determine if it is affecting downloads.

- Do downloads appear to be stuck?
  - Make sure the package does not just seem stuck because it is very large (progress for large packages can take some time to register/change depending on the customer's network speed - we only show progress changes every 0.01%)
  - Check the Network pane in Activity Monitor to try to determine if a download is still in progress.
  - Check the Disk pane in Activity Monitor to try to determine if a download is still in progress.
  - Check the 'In Progress' folder in the download directory and check if the size on disk is increasing (note that writes to the disk can arrive in lumps, so plenty of time should be taken to check).

**If the problem is not resolved, please gather diagnostic information as described in Collecting Diagnostic Information and raise an issue with the dev team**

### Packages Will Not Download

We have seen instances where network mounted filesystems are used as the output location and the machine being used has gone to sleep due to powersave settings. In some cases this can lead to stuck downloads that cannot be cancelled.

There is a script here ([https://github.com/sohonet/FileRunner-Auto-Download/tree/staging/samba\\_keepalive](https://github.com/sohonet/FileRunner-Auto-Download/tree/staging/samba_keepalive)) that can be deployed if there are recurring problems with network mounted filesystems.

- Make sure the package is not very large (progress for very large packages can take some time to register/change)
- Check to make sure the target destination has enough disk space.
- Check the Network pane in Activity Monitor to try to determine if a download is still in progress.
- Check the Disk pane in Activity Monitor to try to determine if a download is still in progress.
- Check the 'In Progress' folder in the download directory and check if the size on disk is increasing (note that writes to the disk can arrive in lumps, so plenty of time should be taken to check).
- 'Disable FileRunner Auto-Download' and 'Enable FileRunner Auto-Download' located in /Applications/FileRunner/Utilities use finder to locate this.

If the download really is completely stuck and a job cannot be cancelled the service must be restarted by using the 'Disable FileRunner Auto-Download' and 'Enable FileRunner Auto-Download' located in /Applications/FileRunner/Utilities use finder to locate this.

**If the problem is not resolved or the service had to be restarted, please gather diagnostic information as described in Collecting Diagnostic Information and raise an issue with the dev team**

### Failed Package Download

If a package has failed to download the reason is not currently displayed, but is usually one of the following things:

- The output directory does not have enough free space to save the package contents.
- Unreliable network connection has led to many errors downloading parts of the package (these will be shown in the debug logs).
- Issues with storage have led to a similar problem as an unreliable connection.

**If the problem is not one of those listed above, please gather diagnostic information as described in Collecting Diagnostic Information and raise an issue with the dev team**

### Auto-Downloader UI Cannot Be Accessed

When running the 'Open FileRunner Auto-Download' application, we have seen the following states:

- The auto-downloader reports that it is not currently enabled but running the 'Enable FileRunner Auto-Download' application states that the service is already enabled.
- The auto-downloader UI cannot connect to the service and asks the user to contact support.

To try to resolve this issue, the first thing to try is to disable, then enable again, but if the UI failure is persistent it usually means one of two things:

- The Auto-Downloader service cannot start for some reason.
- The Auto-Downloader is starting, but the internal web server cannot start.

**In both of the cases above, please gather firewall information, diagnostic information as described in Collecting Diagnostic Information and raise an issue with the dev team**

### Auto-Downloader fails to write to a mounted network drive

If the Auto-Downloader fails to write to a mounted network drive with the following error, then it's possible that the Auto-Downloader process does not have full disk access and can't write to the network drive.

```
ERROR: Failed to add account XXX error:{'success': False, 'action': 'add_account', 'username': 'XXX', 'error': 'Could not create download folder: Permission Denied.'}
ERROR: An unexpected error occurred in the download worker.
Traceback (most recent call last):
  File "filerunner_auto_download/auto_download.py", line 539, in download_worker
  File "filerunner_auto_download/auto_download.py", line 444, in _get_output_free_bytes
  File "tempfile.py", line 553, in NamedTemporaryFile
  File "tempfile.py", line 256, in _mkstemp_inner
PermissionError: [Errno 1] Operation not permitted: 'YYY'
```

If that's the case, please follow the instructions described in the installation steps

This customer case is an example of this issue: 00530979

**Force the Auto-Downloader to download package already downloaded or sent prior to install of the application****USE THIS PROCESS WITH CAUTION!**

```
* Stop the Auto-Downloader ( it will stop any downloads currently in progress and restart them from scratch on start, so be careful )
* In Terminal, go to the base folder of the users home directory ( this is the user who is running the Auto Downloader )
* Backup the state file, eg cp .filerunner-auto-download/state /var/tmp/state-file-backup
* Edit the state file. Remove the package id from the 'completed' list, and remove the pkg details from the saved 'details' dict.
* Start the auto-downloader.
```

**Collecting Diagnostic Information**

If the steps above have failed to resolve an issue, or we have encountered a new problem, it will be necessary to collect diagnostic information from the user in order to file a bug report.

- Collect the contents of a user's ~/.filerunner-auto-download/log folder.
  - Open a terminal window and run the following commands

```
cd ~/.filerunner-auto-download
cat config | python -m json.tool | awk '/api_key/ {s2 = "\"removed\""} {print}' > config-clean-py2
cat config | python3 -m json.tool | awk '/api_key/ {s2 = "\"removed\""} {print}' > config-clean-py3
tar -cvzf ~/Desktop/FileRunnerAutoDownload-Logs.tar.gz config-clean* state version log/*.log
```

- Ask the end user to send file "FileRunnerAutoDownload-Logs.tar.gz" on their desktop via Email to support@sohonet.com with the ticket number in the title
- In the event that the Auto-Downloader will not start (or the ~/.filerunner-auto-download directory is missing) we must check for the existence of the following files/folders:
  - /Library/LaunchDaemons/com.sohonet.filerunner.autodownload.<username>.plist
  - ~/Library/FileRunner-Auto-Download
  - ~/Library/FileRunner-Auto-Download/com.sohonet.filerunner.autodownload.<username>.plist
- The output of 'ls -la' in the following directories is also very useful when diagnosing an issue in order to determine the permissions and existence of important files
  - ~/filerunner-auto-download
  - ~/Library/FileRunner-Auto-Download
  - /Library/LaunchDaemons
  - This can be done with a single command:
    - ls -la ~/.filerunner-auto-download ~/Library/FileRunner-Auto-Download /Library/LaunchDaemons

**HTTP User-Agent to Filerunner AD & Python requests version mapping**

| Filerunner AD Version | Requests Version | HTTP User-Agent                  | TLS 1.2 supported ? |
|-----------------------|------------------|----------------------------------|---------------------|
| v0.5                  | Requests 2.22.0  | filerunner-autodownloader/v0.5.0 | Yes                 |
| v0.4                  | Requests 2.22.0  | python-requests/2.22.0           | Yes                 |
| v0.3 (Py3 version)    | Requests 2.21.0  | python-requests/2.21.0           | Yes                 |
| v0.2.4.3              | Requests 2.18.4  | python-requests/2.18.4           | No                  |
| v0.2.4.2              | Requests 2.7.0   | python-requests/2.7.0            | No                  |

**Third party download accelerators causing excess beanstalk queue size****Diagnose**

- Alarms triggered for excess beanstalk queue size on one or more storage clusters. See grafana graphs (<https://grafana.internal.sohonet.com/d/000000182/filerunner-traffic-monitor-beanstalks?orgId=1>)
- Processed traffic reports, reveal the packages involved. See which packages have large numbers of report on the django admin filerunner2-user-package-activity-log page (<https://hub.sohonet.com/admin/filerunner2/filerunner2userpackageactivitylog/>)
- A particular traffic report will show the exact Swift download urls the customer is using including storage cluster and package path involved

**Cause**

The swift\_trafficmiddleware ([https://github.com/sohonet/swift\\_trafficmiddleware/blob/master/traffic\\_monitor/traffic\\_monitor.py](https://github.com/sohonet/swift_trafficmiddleware/blob/master/traffic_monitor/traffic_monitor.py)) runs on each Swift storage cluster and will store data from every download request in an elastic beanstalk queue. Some third party download accelerators are particularly aggressive and will make thousands of requests with small range header intervals (e.g. 30 bytes). This adds messages to the queue faster than the celery worker can process them, and leads to the database CPU getting pegged near 100%.

**Resolution**

Once the customer and package(s) concerned are identified via the Django admin, the customer should be firmly requested to immediately stop using the download accelerators software.

The long term solution is to rework the swift\_trafficmiddleware ([https://github.com/sohonet/swift\\_trafficmiddleware/blob/master/traffic\\_monitor/traffic\\_monitor.py](https://github.com/sohonet/swift_trafficmiddleware/blob/master/traffic_monitor/traffic_monitor.py)).

**Short term mitigation**

The short term mitigation must be applied on a per package, per storage server basis, as and when a package is being aggressively downloaded.

- ssh on to the storage server(s) involved
- become root
- start a tmux session

- in a continuous loop, run the purge script for the package path involved, and sleep for 5 seconds

Example purge script usage:

```
ssh lax10.storagesvc.sohonet.com
sudo su -
tmux new -s purger
while ;; do date && python3 purge.py '/v1/AUTH_4d549f74486c43f9a47aa7b837cb0be8/___packages___14-12-2021/parves-shahid/7da23227-bd1d-4ba6-84ba-f54ece42992e/fe20e1-2021-12-14-2'
```

Once the customer has stopped causing the overload, **remember to stop the script(s) running!**

## Filerunner Package Issues

Issues where packages fail to build or fail to reach the 'Ready' state

### Package Recovery

Use this flow when the package is in the 'Build Failed' state or if the package has not build with a reasonable time (the largest packages should build with 1 hour of the upload finishing)

1. If a package is in the 'Build Failed' state or has taken too long to build: find the package on the Received Package page <https://admin.fr.sohonet.com/admin/applications/applicationuserpackage/>
2. You can filter by clicking 'Build Failed' on the 'By Status' filter on the right-hand side or use the search box and enter the package name.
3. Tick the box on the Action column for the package on the left-hand side of the page.
4. Select 'Rebuild Received Packages' from the actions drop down and click 'Go'
5. If the build does not work again, Escalate via the case to Development and put the case number in the Filerunner Slack channel.
6. Inform the customer of the build failure and we are investigating
7. If support and development are unable to rebuild the package within 18 hours we should ask the customer to resend the package.

### Package Deletion 'Delete Failed'

1. If a package is in the 'Delete Failed' state, find the package on the Received Package page <https://hub.sohonet.com/admin/applications/applicationuserpackage/>
2. You can filter by clicking 'Delete Failed' on the 'By Status' filter on the right hand side
3. Tick the box on the Action column for the package on the left hand side of the page.
4. Select 'Delete Package' from the actions drop down and click 'Go'

### Moving an existing FileRunner external user between accounts

1. Moving an existing FileRunner user between accounts manually is no longer required.
2. FileRunner users can exist on multiple contracts, so the user should simply be added to the new contract using the customer FileRunner admin 'User Management' page, and removed (if required) using the same page from the old contract.

## Provisioning & Decommissioning

### FileRunner Provisioning

To decommission a FileRunner contract check the "stopped" checkbox on the relevant FileRunner contract.

This will invalidate any user permissions under the contract and users will no longer be able to use the service under that account.

Removing the check from the "stopped" checkbox will remove this restriction, and in this way, the account can be suspended temporarily if required.

## InDepth Information

### Twilio

We currently use Twilio in FileRunner to enable the SMS-sending capability of the PIN Verify feature.

We use different subaccounts within the main FileRunner account:

- Production: **"filerunner"** subaccount
- Staging & local: **"Sohonet Test"** subaccount

### Received Package States

Packages that have multiple files require building, and this task is done offline using a build queue [Celery <http://www.celeryproject.org/>]

This is a relatively quick process, but dependant on the number of files, huge numbers of files may take 'minutes' to build but not hours.

The workers in the queue will retry failed builds automatically.

**NOT\_READY** -- package has been uploaded, but no worker on the queue has taken the task to process

**BUILDING** -- package has been picked from the queue by a worker, and it is currently building it.

**READY** -- package has been built, everything went ok, user can now download.

**REMOVED** -- package has been removed by a user in the front end.

**EXPIRED** -- package has hit the expiry deadline set by the user (between 6 - 72 hours) and is due for deletion in 6 hours (grace period). Only the Dev team can extend the expiry time if the package is in grace period.

**BUILD\_FAILED** -- package has failed to build 3 times and requires attention

**DELETE\_FAILED** -- package needs deletion but something went wrong during the deletion process

**DELETED** -- packages has been successfully removed from the backend storage

## Celery Queue Status

There are 2 FileRunner package building machines, one in LON (currently running on the hub machine itself) and one in LAX SM-X9DBL36B-S-12-LAP12-US

There are 5 queues that jobs are sent to:

```
Default Celery Queue - Handles all other jobs
LON Package Builder
LON Package Deleter
LAX Package Builder
LAX Package Deleter
```

To check the size of the celery queues use the following command on the hub.

```
sudo /usr/sbin/rabbitmqctl list_queues -p hub
celery 0
lon_package_deleter 0
lax_package_builder 0
lon_package_builder 0
lax_package_deleter 0
...done.
```

The important number is the **celery 0** this show the number of jobs waiting in the queue to be processed, this number show not be high (+50) and being high would indicate a problem running tasks and should be escalated

To check the size of rabbitmq's disk limits and disk free

```
# sudo rabbitmqctl status | grep disk_free
{disk_free_limit,1000000000},
{disk_free,1091072000},
```

This shows the amount of disk currently being used by RabbitMQ. The disk\_free\_limit shows the ceiling on the amount of disk RabbitMQ will allow itself to use before refusing to process any more messages.

To view the current jobs executing

```
source /opt/production
celery -A hub.core inspect active
```

To view reserved jobs ( next to be executed)

```
source /opt/production
celery -A hub.core inspect reserved
```

It is normal for these lists to be empty

## Celery Flower GUI

Celery Flower (<http://celery.readthedocs.org/en/latest/userguide/monitoring.html#flower-real-time-celery-web-monitor>) is running on the hub, to access it

```
ssh -L 5555:localhost:5555 hub.sohonet.com
```

then browse to <http://localhost:5555/> on your machine

This show running jobs, job results and jobs waiting to be executed.

## Log Locations

**Remember if the package is being built by the LA package builder, the package building logs will be on the package build node SM-X9DBL36B-S-12-LAP12-US**

/var/log/syslog

/var/log/hub/hub\_\*.log

/var/log/celery/\*.log

Multitail can be useful

`multitail -i /var/log/syslog -I /var/log/hub/hub_*.log /var/log/celery/*.log`

## Django Admin Pages

Contracts:

- <https://hub.sohonet.com/admin/filerunner2/filerunner2contract/>

Users:

- <https://hub.sohonet.com/admin/applications/applicationuser/>

FileRunner Admin:

Only users that have the 'FileRunner 2 admin' are admins and this is set on the users profile page.

## Grafana Admin Pages

- <http://grafana.sohonet.internal/#/dashboard/elasticsearch/FileRunner>

## Whitelisting Filerunner IPs

If a customer requests a list of IPs and/or ports for the purpose of whitelisting, the following table **excluding the notes/dates** can be given out:

| IPs required for Filerunner |                   |   |                               |
|-----------------------------|-------------------|---|-------------------------------|
| Global                      | 193.203.82.154/32 | hub.sohonet.com HAproxy Service IP  | INVALID, THESE ARE IN AWS NOW |
| Europe                      | 193.203.65.160/29 | London Proxy Servers - 1st Set  | Part of the original list     |
|                             | 193.203.66.224/27 | London Proxy Servers - 2nd Set  | Part of the original list     |
|                             | 193.203.66.72/29  | London Proxy Servers - 3rd Set  | Part of the original list     |
|                             | 89.16.227.64/29   | Filerunner Accelerators in London   | August 2nd 2018               |
| Aus/NZ                      | 203.83.193.96/29  | Sydney Aus Proxy Servers  | August 2nd 2018               |
|                             | 67.224.101.206/32 | Filerunner Accelerators for AUS in Los Angeles (Anycast)  | January 7th 2019              |
| North America               | 67.224.101.192/28 | Los Angeles Proxy Servers - 1st Set. Anycast IPs for LA based Filerunner Accelerators are in this range also. | Part of the original list     |
|                             | 67.224.101.208/29 | Los Angeles Proxy Servers - 2nd Set   | Part of the original list     |
|                             | 208.65.208.48/28  | Filerunner Accelerators in New York City, NY  | August 2nd 2018               |
|                             | 173.0.162.128/29  | Filerunner Accelerators in Atlanta GA   | August 2nd 2018               |

Please record the customer name below so that future updates to the list can be communicated correctly

**Please give the IPs as a complete set, don't just give them the IPs for their region. Please remember that DNS is still required on the computer being used for Filerunner**

Alternatively, if the customer needs fully qualified domain names, they are:

```
hub.sohonet.com
*.storagesvc.sohonet.com
fr.sohonet.com
```

The only explicit ports required for Filerunner is TCP 443.

```
FR-HUB-193.203.82.154/32
FR-EU-193.203.65.160/29
FR-EU-193.203.66.224/27
FR-EU-193.203.66.72/29
FR-EU-89.16.227.64/29
FR-AU-203.83.193.96/29
FR-AU-67.224.101.206/32
FR-US-67.224.101.192/28
FR-US-67.224.101.208/29
FR-US-208.65.208.48/28
FR-US-173.0.162.128/29
```

## Customers who have been given the IP list

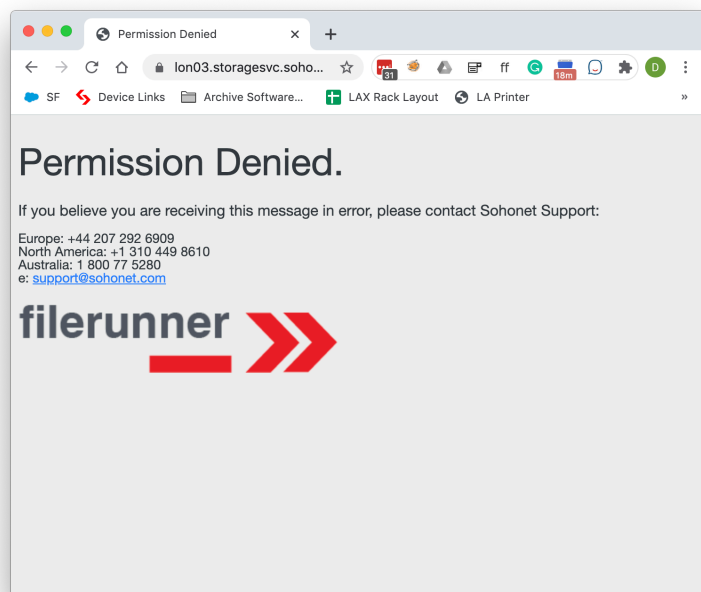
```
# Customer Name // Ticket Number
Fotokem - 00135023
Goldcrest Post NY - 00075846
NBC Universal - 00025531
Instinctual - 00074976
Legendary - 00022690, 00074040
Deluxe UK - 00067857
Paramount - 00039269
ADS Hollywood - 00043810
Skydance - 00055987, 00057259
HBO (Sohonet managed firewall) - 00079359 - updated Oct 30 2018
Dirty Looks (Sohonet Firewall) - 00084623
Mad Old Nut (Sohonet managed firewall) - updated oct 26 2018
Pacific Pictures - 00089531
Lionsgate - Nov 15th 2018
Warner Brothers Leavesden - Witches FW (Sohonet Managed) - 00108732 - updated 4th April 2019
EFilm - 00124271
Warner Bros Pictures - Jim Deas - 00171673
ILM Vancouver - Henrik - 00202034
ITV America - 00224342
Aspect Ratio - 00245242
Mad Old Nut again to pass on to a vendor - 00259631
NF Ocean Prod - 1631 10th Street - 00281845
Cutting Edge Pty Ltd - 90 Victora St. - 00316888
Cinelab London Limited - 00336016
Goldcrest Post Production - 00570879
Harbor Picture Company - 00704829
Pacific Post - 00766007
Aspect Ratio - 00769656
```

## Permisssion Denied package download error

As of July 2020 - we are blocking HTTP requests in Filestore ( impacting Filerunner ) if the source IP is from a Microsoft IP AND if the request includes invalid HTTP headers ('Useragent' and 'Acceptlanguage', valid headers are dash-separated ). This block occurs in Filestore, so the Hub will appear normal and will show the download links correctly. When a request is blocked, we return an HTML error message with the support email and phone numbers (see below ). The following dashboard shows requests that were blocked:

[http://kibana.sohonet.internal/app/kibana#/dashboard/5bee5930-d0b0-11ea-980e-5f506da58536?\\_g=\(refreshInterval%3A\(pause%3A!t%2Cvalue%3A0\)%2Ctime%3A\(from%3Anow-7d%2Cmode%3Aquick\)](http://kibana.sohonet.internal/app/kibana#/dashboard/5bee5930-d0b0-11ea-980e-5f506da58536?_g=(refreshInterval%3A(pause%3A!t%2Cvalue%3A0)%2Ctime%3A(from%3Anow-7d%2Cmode%3Aquick))

If a valid user gets blocked, escalate to the Systems team.



## Viewing Packages

Sent packages can be viewed here by going to the Hub admin, Applications -> Applications -> Sent Packages

<https://hub.sohonet.com/admin/applications/applicationpackage/>

Each package has a session-id, multiple packages can be uploaded in one session, but a new session id is generated every time a user goes to the create package page in the hub, so it is a useful search term.

The session id can be used to query syslog on the hub server, for example:

<https://wiki.sohonet.co.uk/wiki/index.php/FileRunner>



```
mm@DE-R210II-S-14-LDP02-GB:~$ grep 5deeece2 /var/log/syslog-20150204 Feb 4 05:30:43 DE-R210II-S-14-LDP02-GB mod_wsgi: Hub: hub.sohonet.com : {u'file_name': u'L3D_20150203_A.zip.chunk.0000000020', u'object_path': u'5deeece2-d949-48d4-9a62-e34732d0fad0/___root___/L3D_20150203_A.zip.chunk.0000000020-ab73941876b5214c2d0a274c630d9b1f', u'host': u'lax05.storagesvc.sohonet.com', u'file_size': 50000000, u'timing_ms': 22085.055999457836, u'browser': u'chrome'}
```

```
mm@DE-R210II-S-14-LDP02-GB:~$ sudo grep 3b91e515 /var/log/syslog-20150204 Feb 3 16:58:58 DE-R210II-S-14-LDP02-GB mod_wsgi: Hub: hub.sohonet.com : {u'file_name': u'bigbuckbunny3times dnxhd120.28mins.mov.chunk.0000000455', u'object_path': u'3b91e515-e67e-4858-ad8a-5695010fb7e4/___root___/bigbuckbunny3times dnxhd120.28mins.mov.chunk.0000000455-5952b6c95ec88103b73d6fe3710f6730', u'host': u'lon09.storagesvc.sohonet.com', u'file_size': 50000000, u'timing_ms': 8828.93999992144, u'browser': u'chrome'}
```

## Upload and Download Activity

- <https://hub.sohonet.com/admin/filerunner2/filerunner2packageactivitylog/>
- <https://hub.sohonet.com/admin/filerunner2/filerunner2userpackageactivitylog/>

These show all the temporary urls we generate for users (they may or may not actually perform the request on the url we generate but it is a good source of user activity)

Other things to note are:

- Uploads are in parallel, so the performance needs to be aggregated across all the proxies, from the syslog above 50000000 in 8828 ms = 6.25MB/s for a single thread to a single proxy (There are 4 proxies in LAX and around 8 threads in chrome)
- Downloads are single threaded unless a browser download agent such as (DownloadThemAll or Filerunner Auto Download) is used.

## Storage

FileRunner content is put into Sohonet Storage direct from the browser.

All files are placed into a single 'filerunner' account.

Each companies files are placed into a separate container which matches the **slug** name for the company

Large files are upload in chunks and combined using swift SLO.

Download packages (which are tar files containing all uploaded files) are placed in a special container named **\_\_packages\_\_** and each companies packages in a sub\_folder

### Example

Tenant: FileRunner

sohonet/<package\_id>/ file\_1

sohonet/<package\_id>/ file\_2

sohonet/<package\_id>/ file\_3

\_\_packages\_\_/sohonet/<package\_id>/ package.tar

## Front End Technical Info

Files are uploaded via javascript and [XMLHttpRequests <https://developer.mozilla.org/en/docs/Web/API/XMLHttpRequest>]

This is cross browser, but has varied performance dependant on OS and browser version. (more info on request)

Large files are split into chunks, the current threshold for a large file is 50MB, files under this value are sent 'as is'

Uploads are sent using multiple threads to multiple proxy servers in parallel.

Current Values are:

**max\_connections** - maximum numbers of connections in total to all proxies

**connections\_per\_server** - this is browser dependant but as a rule of thumb is 6

Example values for the proxy servers are:

- <https://lon-proxy-02.storagesvc.sohonet.com>
- <https://lon02.storagesvc.sohonet.com/>
- <https://lon03.storagesvc.sohonet.com/>
- <https://lon04.storagesvc.sohonet.com/>
- <https://lon05.storagesvc.sohonet.com/>

## Accelerator Proxies

In order to speed up downloads from places far apart from the file store where a particular file lives, we have deployed proxies which, via a direct, high-speed connection to the storage locations, provide an accelerated connection. ``Only Used for Downloads``. There are currently 7 deployed instances:

- <https://lb-ny-lon-01.storagesvc.sohonet.com/> From NY to London (storage location LON-01).
- <https://lb-la-lon-01.storagesvc.sohonet.com/> From LA to London (storage location LON-01).
- <https://lb-lon-la-01.storagesvc.sohonet.com/> From London to LA (storage location LAX-01).
- <https://lb-ny-lax-01.storagesvc.sohonet.com/> From NY to LA (storage location LAX-01).
- <https://lb-atl-la-01.storagesvc.sohonet.com/> From Atlanta to LA (storage location LAX-01).
- <https://lb-atl-lon-01.storagesvc.sohonet.com/> From Atlanta to London (storage location LON-01).
- <https://lb-la-aus-01.storagesvc.sohonet.com/> From LA to Sydney (storage location AUS-01).

## Naming standard

lb-Physical Location of accelerator-Location of backend Filerunner Instance-Numeric Instance Counter

For example: <https://lb-la-lon-02.storagesvc.sohonet.com/> is a VM ( or anycast IP offered by multiple VMs) physically in Los Angeles that proxies to Filestore in London and is the 2nd accelerator instance

## Detailed Explanation

These proxies are configured as storage URLs for the particular storage location they point to, and marked as 'LB Proxy' This terminology will be updated in the hub to the term "accelerator" at some point in the future. This is how the storage URLs looks like for an accelerator proxy:

| APPLICATION STORAGE URLS  |                                     |                                     |                          |                          |  |
|---|-------------------------------------|-------------------------------------|--------------------------|--------------------------|--|
| URL   | INTERNET PROXY ?                    | LB PROXY ?                          | DISABLED ?               | DELETE?                  |  |
| <a href="https://lon06.storagesvc.sohonet.com">https://lon06.storagesvc.sohonet.com</a><br>Currently: <a href="https://lon06.storagesvc.sohonet.com">https://lon06.storagesvc.sohonet.com</a><br>Change: <input type="text" value="https://lon06.storagesvc.sohonet.com"/>                                    | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |  |
| <a href="https://lb-ny-lon-01.storagesvc.sohonet.com">https://lb-ny-lon-01.storagesvc.sohonet.com</a><br>Currently: <a href="https://lb-ny-lon-01.storagesvc.sohonet.com">https://lb-ny-lon-01.storagesvc.sohonet.com</a><br>Change: <input type="text" value="https://lb-ny-lon-01.storagesvc.sohonet.com"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |  |
| <a href="https://lon-proxy-03.storagesvc.sohonet.com">https://lon-proxy-03.storagesvc.sohonet.com</a><br>Currently: <a href="https://lon-proxy-03.storagesvc.sohonet.com">https://lon-proxy-03.storagesvc.sohonet.com</a><br>Change: <input type="text" value="https://lon-proxy-03.storagesvc.sohonet.com"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |  |
| <a href="https://lon-proxy-03.storagesvc.sohonet.com">https://lon-proxy-03.storagesvc.sohonet.com</a><br>Currently: <a href="https://lon-proxy-03.storagesvc.sohonet.com">https://lon-proxy-03.storagesvc.sohonet.com</a><br>Change: <input type="text" value="https://lon-proxy-03.storagesvc.sohonet.com"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |  |
| <a href="https://lon08.storagesvc.sohonet.com">https://lon08.storagesvc.sohonet.com</a><br>Currently: <a href="https://lon08.storagesvc.sohonet.com">https://lon08.storagesvc.sohonet.com</a><br>Change: <input type="text" value="https://lon08.storagesvc.sohonet.com"/>                                    | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |  |
| <a href="https://lon08.storagesvc.sohonet.com">https://lon08.storagesvc.sohonet.com</a><br>Currently: <a href="https://lon08.storagesvc.sohonet.com">https://lon08.storagesvc.sohonet.com</a><br>Change: <input type="text" value="https://lon08.storagesvc.sohonet.com"/>                                    | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |  |
| <a href="https://lon07.storagesvc.sohonet.com">https://lon07.storagesvc.sohonet.com</a><br>Currently: <a href="https://lon07.storagesvc.sohonet.com">https://lon07.storagesvc.sohonet.com</a><br>Change: <input type="text" value="https://lon07.storagesvc.sohonet.com"/>                                    | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |  |
| <a href="https://lon07.storagesvc.sohonet.com">https://lon07.storagesvc.sohonet.com</a><br>Currently: <a href="https://lon07.storagesvc.sohonet.com">https://lon07.storagesvc.sohonet.com</a><br>Change: <input type="text" value="https://lon07.storagesvc.sohonet.com"/>                                    | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |  |
| <a href="https://lon06.storagesvc.sohonet.com">https://lon06.storagesvc.sohonet.com</a><br>Currently: <a href="https://lon06.storagesvc.sohonet.com">https://lon06.storagesvc.sohonet.com</a><br>Change: <input type="text" value="https://lon06.storagesvc.sohonet.com"/>                                    | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |  |
| <a href="https://lb-la-lon-01.storagesvc.sohonet.com">https://lb-la-lon-01.storagesvc.sohonet.com</a><br>Currently: <a href="https://lb-la-lon-01.storagesvc.sohonet.com">https://lb-la-lon-01.storagesvc.sohonet.com</a><br>Change: <input type="text" value="https://lb-la-lon-01.storagesvc.sohonet.com"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |  |

In order to enabled them for a specific contract, the checkbox labelled 'Can use LB proxies' must be checked in the admin interface:

**FILERUNNER2 CONTRACT SETTING**

**FileRunner2 Contract Setting: FileRunner2ContractSettings object** Delete

☒ **Can add ad hoc**  
Can Users under this contract add ad-hoc users

☐ **Can extend expiry**  
Whether senders under this contract can choose to extend the expiry time of uploaded packages

Verification: none

☐ **Can select storage location**  
Whether users under this contract can select storage location for uploaded packages

Available app groups:

LAX LB Group  
LON LB Group  
LON Staging

+

Locations available for users to upload packages Hold down "Control", or "Command" on a Mac, to select more than one.

☒ **Can use lb proxies**  
Whether users under this contract get access to storage load balancers for faster transfers

Once all is set up, on package download, the application will perform a latency race between the available storage URLs, and provide a download URL pointing to the optimum proxy.

Once a user downloads a package via one of the accelerators we will store that fact in the corresponding activity log entry, indicating the IP of the accelerator it transversed:

Change FileRunner 2 Download Activity Log

Secure <https://hub-staging.dev.sohonet.com/admin/filerunner2/filerunner2userpackageactivitylog/488544/change/>

**SOHONET HUB ADMIN**  WELCOME, HUB. [VIEW SITE](#) / [CHANGE P](#)

DASHBOARD BOOKMARKS APPLICATIONS ADMINISTRATION **FILERUNNER** EDIT HELP TEXT REPORT GENERATOR STORAGE MAI

STORAGE REPORTING SETTINGS

Home > Filerunner2 > FileRunner 2 Download Activity Logs > test-lalb-small-0002 for hub - Download (1.05 MB from 193.203.87.178)

Change FileRunner 2 Download Activity Log

User package: test-lalb-small-0002 for hub

Log type: Download

☒ Verified

Ip: 193.203.87.178

☒ Is smn

Load balancers: 89.16.227.64

Temp url: [https://lb-lon-la-01.storagesvc.sohonet.com/v1/AUTH\\_bf9eb77ccb5e4619b548e4dcaf12eafd/\\_packages\\_\\_25-05-2018/hub/1d5833c1-e668-4096-84aeb4b377f1dea/3e0e6a-2018-05-25-081500-25df9b-test-lalb-small-00/48d8fd83-a0b7-415f-b481-1f187bb51ec4?temp\\_url\\_sig=6231b46e2138c8a7ce68715beff412df0953b3f4&temp\\_url\\_expires=1527496261&filename=file-1](https://lb-lon-la-01.storagesvc.sohonet.com/v1/AUTH_bf9eb77ccb5e4619b548e4dcaf12eafd/_packages__25-05-2018/hub/1d5833c1-e668-4096-84aeb4b377f1dea/3e0e6a-2018-05-25-081500-25df9b-test-lalb-small-00/48d8fd83-a0b7-415f-b481-1f187bb51ec4?temp_url_sig=6231b46e2138c8a7ce68715beff412df0953b3f4&temp_url_expires=1527496261&filename=file-1)

Transaction: txef167543545547c6b57fc-005b07c9cb

Timestamp: May 25, 2018, 8:31 a.m.

Bytes: 1048576

Duration: 0.0161538124084

## Useful Information for Dev Team Triage

This section includes a list of requirements for a member of the development team to perform bug triage and hub updates as well as a list of places to locate useful information.

### Triage Requirements

Some things everyone on the development team on-call rota needs to make sure they can do/access in order to triage FileRunner bugs:

- Check 'login as' in the Hub admin
- Check for login & sudo on the machines listed in the DEPLOYMENT.md file in the hub.sohonet.com github repo
- Check that you have access to the Engineering VPN so you can log into the machines
- Check grafana access to the following metric URLs:
  - <http://grafana.sohonet.internal/dashboard/db/hub-perf?refresh=30s&orgId=1>
  - <http://grafana.sohonet.internal/dashboard/db/storage-customer-usage-global?orgId=1>
- Check hub admin access (<https://hub.sohonet.com/admin>)
- Check superuser on the hub (so you can log in as other users). If you have access to 'log in as Jane Demo' etc, then you have superuser access.

## Useful Places to Start

Depending on the issue the following list contains useful information or places to start looking for the causes of issues:

- Useful Hub URLs for getting details of the current package state:
  - (Sent Packages) <https://hub.sohonet.com/admin/applications/applicationpackage/>
  - (Received Packages) <https://hub.sohonet.com/admin/applications/applicationuserpackage/>
- Lots of other useful info is available under the FileRunner dropdown on <https://hub.sohonet.com/admin/>
- Useful logs can be found in Papertrail (<https://my.papertrailapp.com/groups/9274581/events>) and errors (including traces) are reported via Sentry.
- Hub is now deployed using Terraform to AWS and instructions for it can be found in the hub-systems repo <https://github.com/sohonet/hub-systems/>

## Programs known to conflict with Filerunner

### Intrusion prevention systems (IPS)

also known as intrusion detection and prevention systems (IDPS), are network security appliances that monitor network or system activities for malicious activity. The main functions of intrusion prevention systems are to identify malicious activity, log information about this activity, report it and attempt to block or stop it

See [https://en.wikipedia.org/wiki/Intrusion\\_detection\\_system#Intrusion\\_prevention](https://en.wikipedia.org/wiki/Intrusion_detection_system#Intrusion_prevention)

### Data loss prevention software

Data Loss Prevention (DLP) software are used by companies in order to manage who has access to what files, monitor access to sensitive files, and revoke access to these files at any point.

The way DLP monitoring works is similar to Antivirus where they sit in the background and scan files accessed by users. As a result they can act as a potential bottleneck and cause problems with browsers which directly affects Filerunner. This could result in browsers freezing during file selection process or upload bandwidth being limited.

Bear in mind, Chrome freezing shouldn't be confused with another known issue where if large amount of files were selected using browse option, Chrome would freeze for a brief period. When DLP is enabled, browser will freeze even if the user were to select a single file irrelevant of size.

At the moment we only know about Symantec's DLP, so feel free to add any other DLP programs that you come across known to cause problems.

Lionsgate UK (Possibly US as well) are using DLP software from Symantec (<https://www.symantec.com/products/data-loss-prevention>). Below are the following issue the software was causing

- In Chrome, when they select a file to upload using Browse/File Selector, browser can freeze anywhere between few seconds to few minutes depending on file size. For example, adding a 50MB file was freezing for about 50 seconds.
- It didn't matter if they dragged and dropped the file or selected using browse option, Chrome still froze for a brief period.
- Firefox didn't suffer the browser freezing problem but bandwidth was limited to 100Mbps during upload.

As the program doesn't support excluding browsers from scan process, there is no workaround other than completely disabling the program. This isn't something Lionsgate didn't want to do.

Lionsgate are working with Symantec on this issue and have informed us that they will provide an update once they fix/work around the issue.

## Known Issues, Report Bugs and feature requests

Please see Product Issues

## FileRunner Development

Software development information for FileRunner can be found in the FileRunner\_Development page.

Retrieved from 'https://wiki.sohonet.co.uk/wiki/index.php?title=FileRunner&oldid=205803'

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