

Syncting

A Ship to Shore File Syncing Tool

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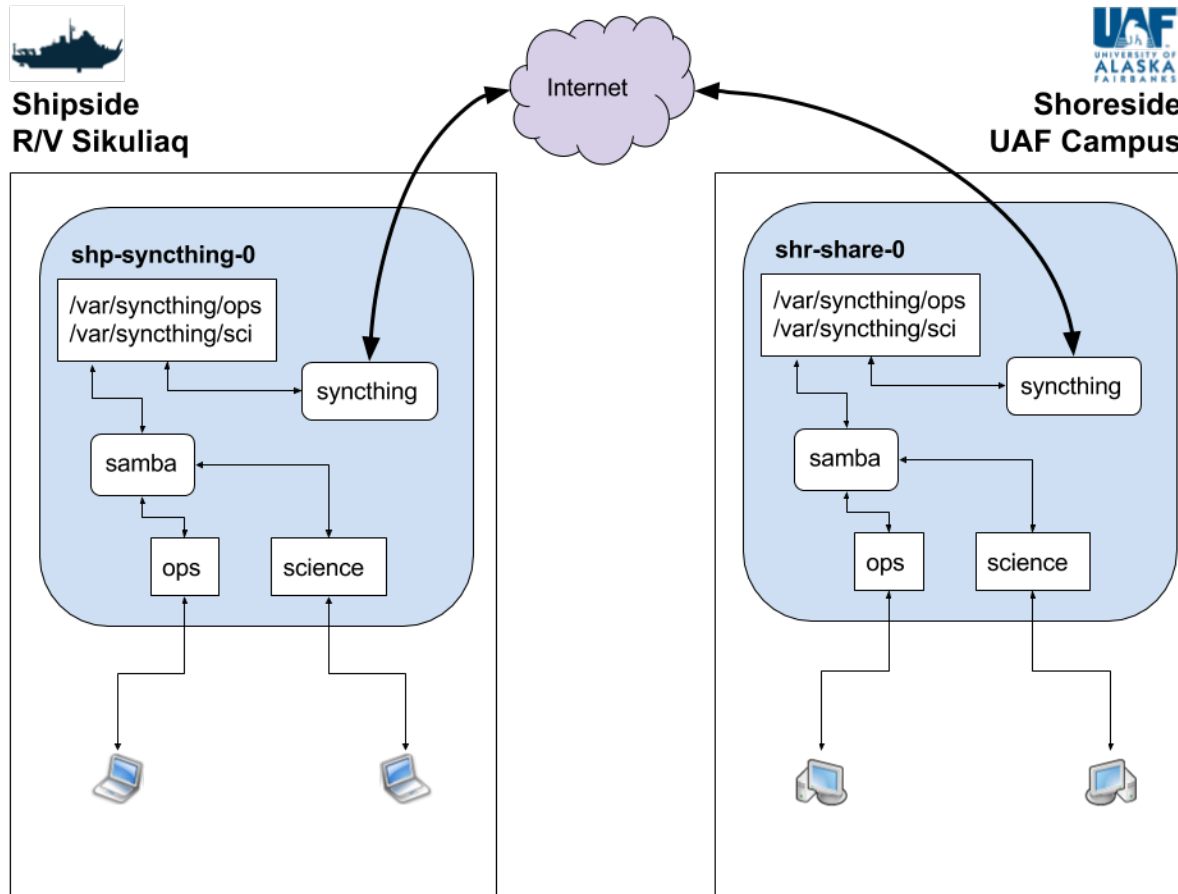
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<https://www.sikuliatq.alaska.edu>



Sikuliaq Ship to Shore (S2S) File Sync Service

<http://share.sikuliaq.alaska.edu/s2s/>



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Syncting Web UI

The screenshot shows the Syncting web interface for the device 'shp-syncting-0.sikuliaq.alaska.edu'. The browser address bar shows 'localhost:8484'. The page features a navigation bar with 'Syncting', 'Upgrade To v0.14.39', 'English', 'Help', and 'Actions'. The main content is divided into three sections: 'Folders', 'This Device', and 'Remote Devices'. The 'Folders' section lists 'Chocolatey Updates', 'Operations', and 'Science', all marked as 'Up to Date'. The 'This Device' section provides system statistics for 'shp-syncting-0.sikuliaq.alaska.edu', including download/upload rates, local state (5400 items, ~20.2 GiB), RAM (196 MiB), CPU (0.84%), listeners (2/2), discovery (5/8), uptime (62d 21h 33m), and version (v0.14.23, Linux (64 bit)). The 'Remote Devices' section lists 'shp-win10-0' and 'shr-share-0.sikuliaq.alaska.edu', both 'Up to Date'. A footer contains links for Home page, Documentation, Support, Statistics, Changelog, Bugs, Source Code, and Twitter.

The screenshot shows the Syncting web interface for the device 'shr-share-0.sikuliaq.alaska.edu'. The browser address bar shows 'share.sikuliaq.alaska.edu:8384'. The page features a navigation bar with 'Syncting', 'English', 'Help', and 'Actions'. The main content is divided into three sections: 'Folders', 'This Device', and 'Remote Devices'. The 'Folders' section lists 'Operations' and 'Science', both marked as 'Up to Date'. The 'Operations' folder is expanded to show details: Folder ID (jcwmy-kqxw7), Folder Path (/nfs/syncting/ops/), Global State (837, ~5.09 GiB), Local State (837, ~5.09 GiB), File Pull Order (Smallest First), File Versioning (Simple File Versioning), Shared With (shp-syncting-0), Last Scan (2017-10-17 12:58:15), and Latest Change (Updated .DS_Store). The 'This Device' section provides system statistics for 'shr-share-0.sikuliaq.alaska.edu', including download/upload rates, local state (4232 items, ~7.95 GiB), RAM (65.3 MiB), CPU (0.74%), listeners (2/2), discovery (5/8), uptime (6d 19h 30m), and version (v0.14.39, Linux (64 bit)). The 'Remote Devices' section lists 'shp-syncting-0', marked as 'Up to Date'. A footer contains links for Home page, Documentation, Support, Statistics, and Changelog.



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Sikuliaq S2S Operations Directory Structure

The screenshot shows a macOS Finder window titled 'Cruises'. The window displays a list of files and folders with columns for Name, Date Modified, Size, and Kind. The directory structure is as follows:

Name	Date Modified	Size	Kind
.DS_Store	Today, 4:38 PM	12 KB	Unix E...le File
.sync-conflict-20170717-215753.DS_Store	Jul 17, 2017, 12:03 PM	8 KB	Document
▶ 2014	Jul 17, 2017, 1:55 PM	--	Folder
▶ 2015	Jul 17, 2017, 2:12 PM	--	Folder
▶ 2016	Jul 17, 2017, 2:20 PM	--	Folder
▼ 2017	Yesterday, 11:08 AM	--	Folder
.DS_Store	Today, 4:39 PM	35 KB	Unix E...le File
▶ SanDiegoFallLayup	Oct 10, 2017, 10:14 AM	--	Folder
▶ SKQ201701S-Seibel	Sep 4, 2017, 2:43 PM	--	Folder
▶ SKQ201703S-Girton	Sep 4, 2017, 3:15 PM	--	Folder
▶ SKQ201704S-Dever	Sep 17, 2017, 4:02 PM	--	Folder
▶ SKQ201705S-William-Wilcock	Sep 17, 2017, 4:04 PM	--	Folder
▶ SKQ201707S-HongshegBi	Sep 20, 2017, 2:44 PM	--	Folder
▶ SKQ201708T - Dutch to Nome	Jul 17, 2017, 11:48 AM	--	Folder
▶ SKQ201709S-Danielson-Krause	Sep 20, 2017, 3:10 PM	--	Folder
▶ SKQ201711T - Seward-Nome	Jul 18, 2017, 8:00 AM	--	Folder
▶ SKQ201712S-Juranek	Aug 3, 2017, 3:29 PM	--	Folder
▶ SKQ201713S-Ashjian	Sep 20, 2017, 5:03 PM	--	Folder
▶ SKQ201714T-Nome-Newport	Sep 22, 2017, 5:01 AM	--	Folder
▶ SKQ201715S-Dever-Fall	Oct 10, 2017, 1:26 PM	--	Folder
▶ SKQ201716T-Newport-SanDiego	Yesterday, 11:09 AM	--	Folder
▼ SKQ201717S-Angle	Oct 15, 2017, 2:59 PM	--	Folder
.DS_Store	Oct 15, 2017, 2:59 PM	23 KB	Unix E...le File
▶ AUVs	Oct 15, 2017, 2:54 PM	--	Folder
▶ Berthing-Plan	Oct 7, 2017, 3:01 PM	--	Folder
▶ Communications	Oct 15, 2017, 2:54 PM	--	Folder
▶ CruisePlan	Oct 14, 2017, 12:22 PM	--	Folder
▶ decklayout	Jul 17, 2017, 11:56 AM	--	Folder
▶ HazMat	Sep 14, 2017, 8:36 AM	--	Folder
▶ Loading	Oct 7, 2017, 3:12 PM	--	Folder
▶ Personnel_Manifest	Oct 13, 2017, 12:57 PM	--	Folder
▶ 2018	Sep 21, 2017, 9:39 PM	--	Folder



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Sikuliaq Ship to Shore (S2S) File Sync Service

Pro's

- Cross Platform (Win, Mac, Linux, Android, RPi)
- Bi-Directional Directory Synchronization
- Bandwidth Throttle
- Secure Transport / No Cloud Deps
- Stable and Robust
- Fault Tolerant of Intermittent connectivity
- Eventually Consistency
- Mature Web UI
- Feature Full
- Directory Versioning

Con's

- Filesystem Limitations
 - Filenames
 - Symlinks
- Requires Internet to establish connections
- Moderate Learning Curve
- Free space is needed on all nodes



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Sikuliaq Ship to Shore (S2S) File Sync Service

Use Cases

- File Sharing
- Personal Device Synchronization
- Mobile Photo Sync
- Application Replication
- Software Distribution
- Near Real Time Data Sync



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RVTEC 2017 Hands on Demo

Client Side

1. Connect to **SQK RVTEC** WiFi Hotspot
2. Open:
<http://shpdev-syncthing-0/software/Syncthing>
3. Download the **Syncthing** version for your operating system
4. Extract the syncthing.[tgz|zip] file on your computer
5. Navigate to the extracted files and run the **syncthing** binary.
 - a. This will launch your browser at:
<http://localhost:8384>
6. Allow access by your local firewall to ports:
 - a. **TPC/22000**
 - b. **UDP/21027**
7. Click Add Remote Device
8. Enter **Device ID**:
 - a. G67T47T-EW005M2-DM7PRHE-ACQXA3Q-QPQZY0J-MWKE2ET-GIKHBCU-NEYTWAK
9. **Device Name**: shpdev-syncthing-0
10. Click **Save**

Server Side

11. Go to: <http://shpdev-syncthing-0:8384/>
12. Wait for connection request to show up (~2 min)
13. Add device and share **RVTEC17** Folder

Client Side

14. Wait for folder share request to show up (~2 min)
15. Create an RVTEC17 folder on you computer, note the path e.g: C:\User\me\Desktop\RVTEC17
16. Accept the folder share request and associate with the local path on your computer.

References

- <https://syncthing.net/>
- <https://docs.syncthing.net/intro/getting-started.html>
- <https://docs.syncthing.net/users/firewall.html#firewall-setup>



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