



Fink services

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Open data is not enough

Alert data is public, but

- Data flows in real-time: *require continuous attention*
- Data is useful after its initial usage: *storage always increases*
- Rate is big: *one human is not enough to look at every single alert*

The role of Fink, as a broker, is to provide assistance in dealing with this data

- From alert reception, online analysis and redistribution to long-term storage
- From visualisation and offline scientific analysis to publication

We do this in the form of a set of services: *backend* (hidden from the users), and *frontend* (user-facing). Most of them are based on microservices (services talking to each others).



Designing a service?

The use of computers is never neutral

- Users have various background: *past experience matters*
- Users have various skills: *no obviousness really*
- Users have various needs: *I prefer to have X over Y here*

My favourite rules are

- Prefer widely used protocols over custom ones
- As ergonomic as possible, and as custom as necessary
- Document with examples, rather than a long speech
- Collect feedback and statistics: a service should be useful for users



Current services

We currently manage 5 services:

- fink-broker (backend)
- Science Portal + REST API: <https://fink-portal.org>
- Livestream: <https://fink-broker.readthedocs.io/en/latest/services/livestream/>
- Data Transfer: <https://fink-portal.org/download>
- Gravitational Waves: <https://fink-portal.org/gw>



Current services

We currently manage 5 services:

- fink-broker (backend): **ok!**
- Science Portal + REST API: **not clear what it offers exactly**
- Livestream: **too complicated for everybody**
- Data Transfer: **ok!**
- Gravitational Waves: **can be generalised for any crossmatch!**

The current situation is not ideal:

- Naming is not clear
- Confusion about data provenance (database vs original alert packet)
- Difficult to expand coherently to new services



Reorganising Fink services

The Science Portal will become the unique gateway to all Fink frontend services:

- **Search:** <https://fink-portal.org>
 - Fink Database search engine
- **Transfer:** <https://fink-portal.org/transfer>
 - Fink bulk download service
- **Stream:** <https://fink-portal.org/stream> (coming)
 - Fink livestream & alert bot service
- **Xmatch:** <https://fink-portal.org/xmatch> (coming)
 - Catalog or footprint cross-match service
- **Graph:** <https://fink-portal.org/graph> (coming)
 - Graph creation & manipulation service

**Expected
Spring 2024**



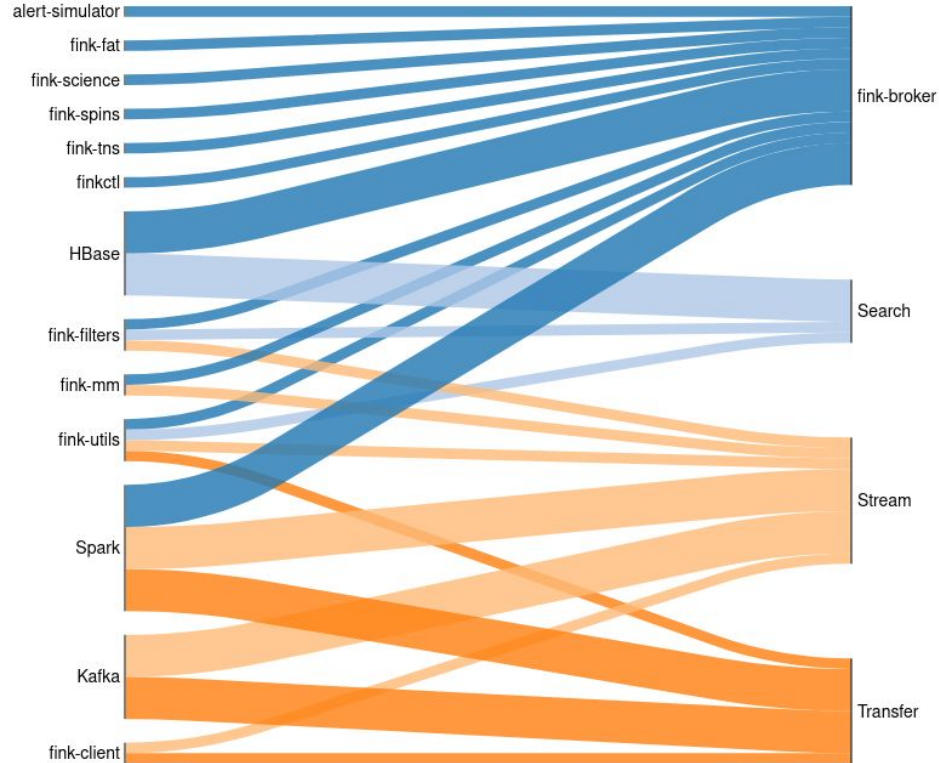
They will be a demythification session on Tuesday

Fink ecosystem

Services are made from software or library “bricks”, that are combined together.

Bricks are developed in large parts by the community of users – we handle the combination & deployment.

All open source, and contributions are welcome!



What to use, and when?

Service	Delay for new data	History access	Login	Best for
Search (incl. API)	~12h after the night	Yes	No	Visualisation, Simple queries, daily inspection, automated workflows
Stream	Real-time	No (alert only)	Yes	Real-time analysis, automated workflows, follow-up observations
Transfer	~12h after the night	No (alert only)	Yes	Bulk download, complex queries, exotic analyses
Xmatch	~12h after the night	No (alert only)	No	<i>Large catalogs or footprints crossmatch</i>
Graph	~12h after the night	No (alert only)	Yes	<i>Complex queries</i>



Search v4

Ready for the new version?

<https://fink-portal.org>

