

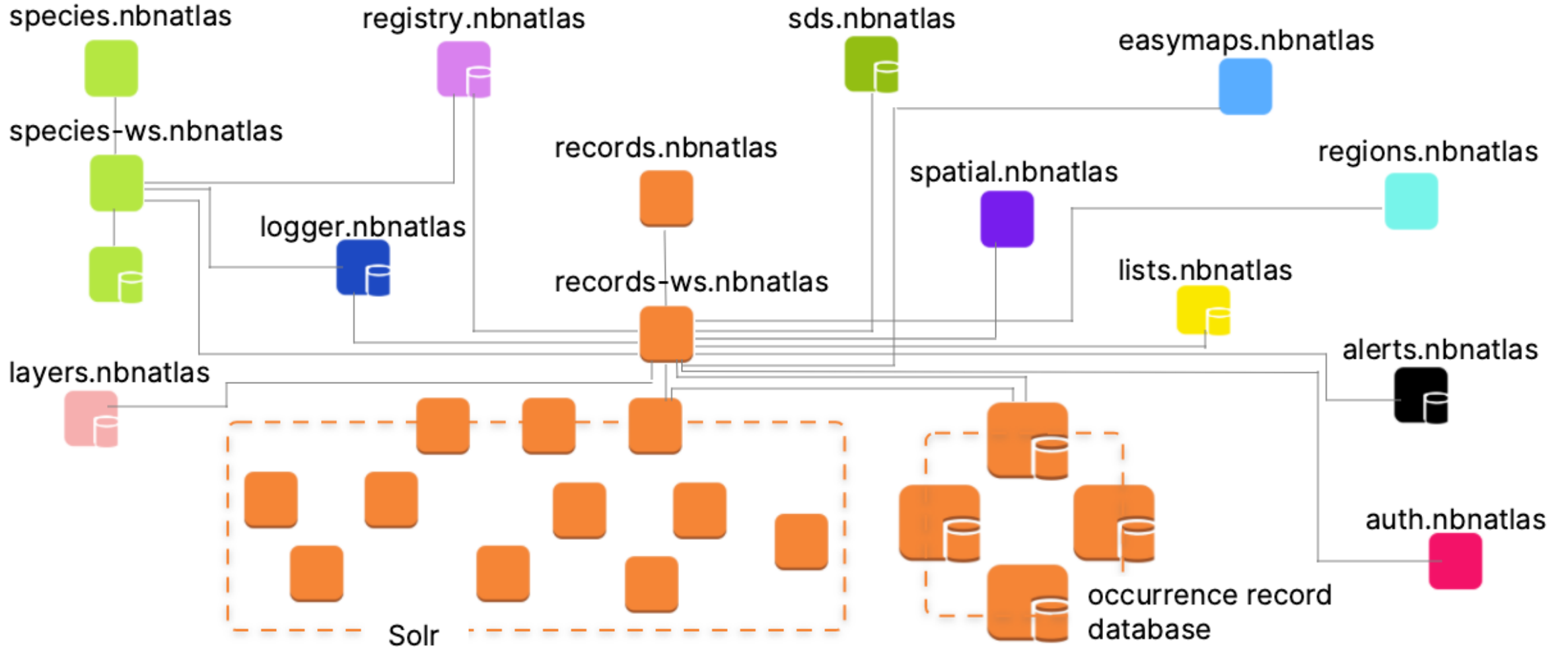
# NBN Atlas 2023 update - and what's behind NBN Atlas

**Helen Manders-Jones**

**Lead Developer**

**23 November 2023**

# The NBN Atlas is 36 computers



# View occurrence records

Records | Map | Charts | Record Images | Overview and download

Alerts per page: 20 | sort: Record date | order:

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Species: *Fratercula arctica* | Puffin Date: 2022-05-25 Northern Ireland OSGR: D093518  
Data Resource: INaturalist Records From Northern Ireland Basis Of Record: Human Observation [View record](#)

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Species: *Fratercula arctica* | Puffin Date: 2020-05-04 England OSGR: ST3265  
Data Resource: BRERC Notable Species Records Within The Last 10 Years Basis Of Record: Human Observation [View record](#)

species.nbnatlas

registry.nbnatlas

species-ws.nbnatlas

logger.nbnatlas

records.nbnatlas

spatial.nbnatlas

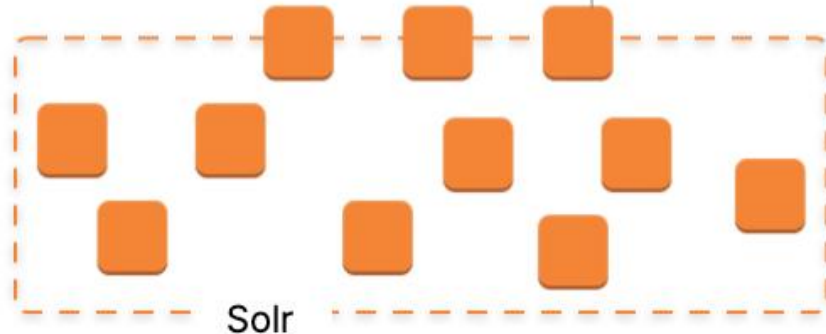
regions.nbnatlas

layers.nbnatlas

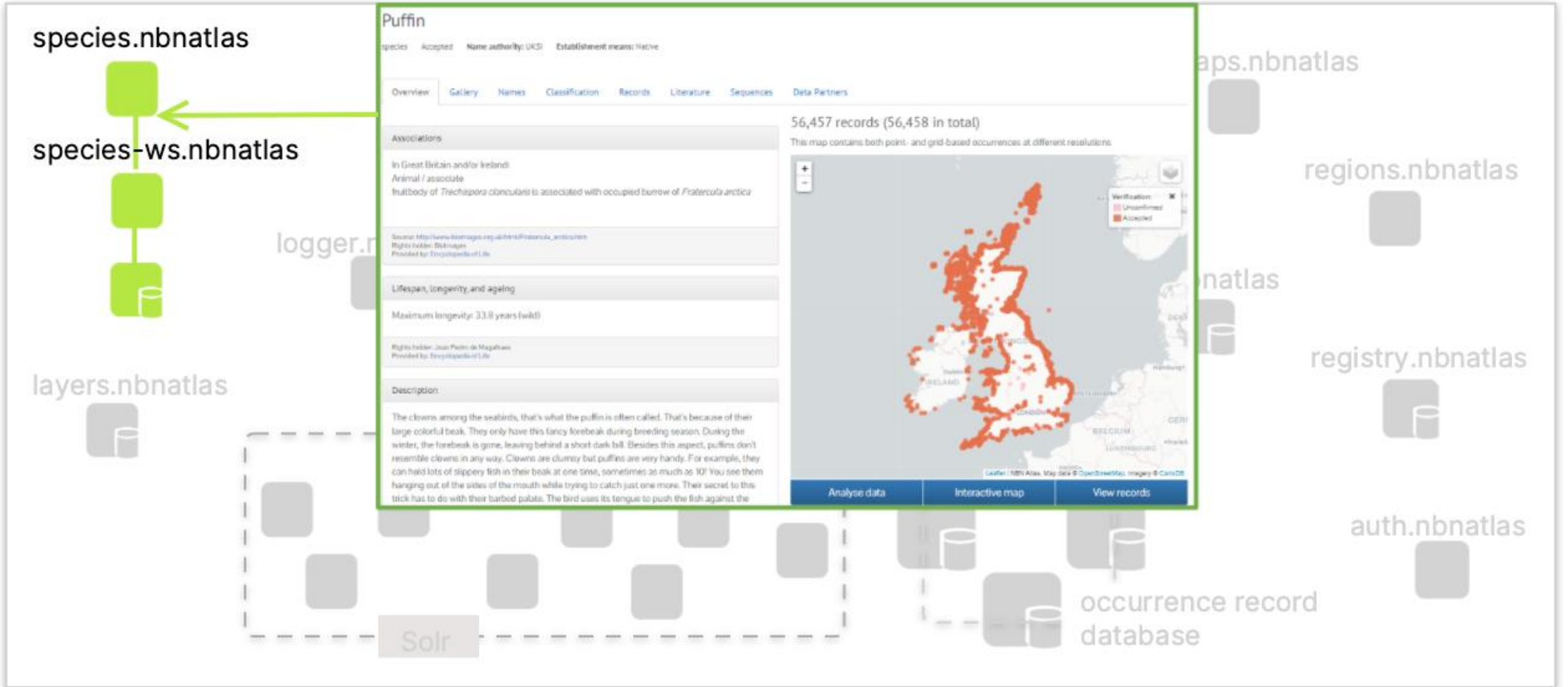
records-ws.nbnatlas

lists.nbnatlas

alerts.nbnatlas



# Viewing species overview page



"Need to upgrade Solr"

"Problems with Solr"

"Solr instability!!!"

# Solr is a search engine

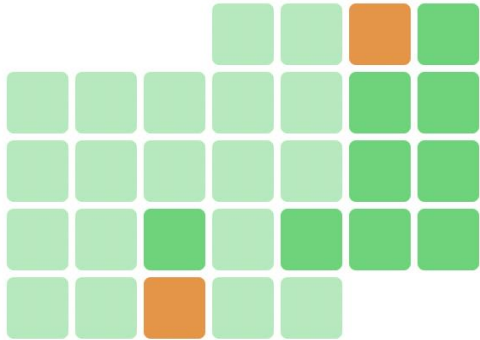
- Each occurrence record is a document
- We have > 250 million documents
- Solr is the "thing" that searches all the documents
- i.e. Solr is a search engine

# Why Solr was a problem

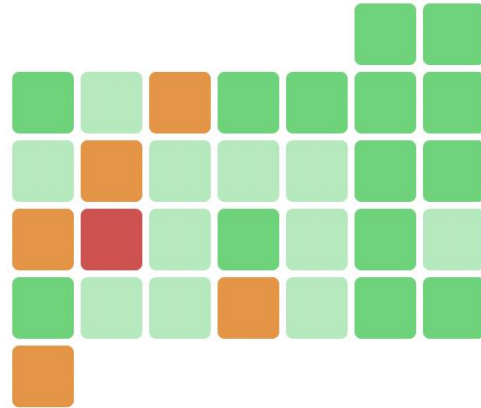
- Solr is very complicated
- It's configuration was not adequate
- So we learnt all about Solr
- Designed lots of load tests
- Determined optimal configuration

# NBN Atlas performance has been transformed

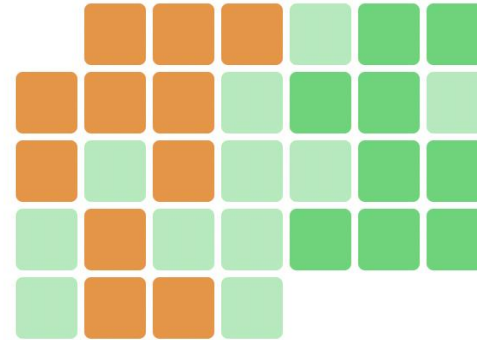
June 2023



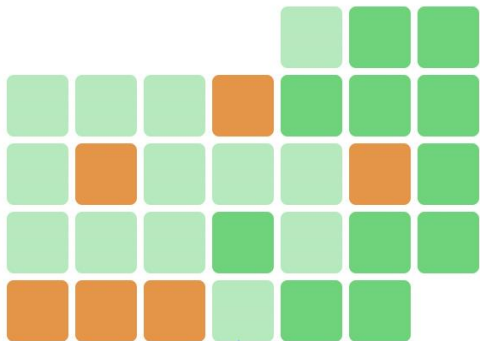
July 2023



August 2023

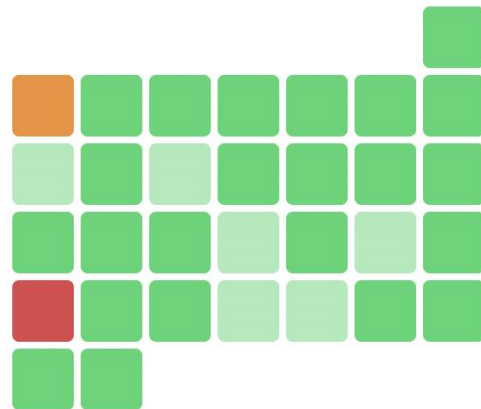


September 2023

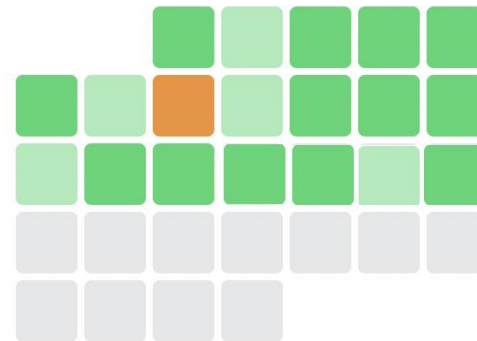


↑  
Solr Upgrade

October 2023



November 2023



Orange square: "Atlas unavailable"

Green square: Atlas working OK







**Butterfly  
Conservation**

Saving butterflies, moths and our environment



Butterfly Conservation added 46 million records to the NBN Atlas

208 million



254 million occurrence records

# Importance of feedback



Excellent



Good



Medium



Poor



Very Bad

# NBN Atlas computing team



Helen



Keith

ALA have 16 members in development team and 132 million occurrence records

# Next years programme of work

- Migrate to a new data processing pipeline
- Access Controls
- Maps – publication ready and embeddable maps
- Polygon to polygon searches – Proof of Concept
- Support eDNA data
- Automatic ingestion of Darwin Core archives
- Metadata overhaul
- Conservation designations
- Save searches - allow users to save their search criteria
- Allow users to set data quality filters
- Additional metrics - data quality, taxon coverage/completeness
- Upgrade the Spatial portal

Helen Manders-Jones  
h.manders.jones@nbn.org.uk

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[Large Stonefly](#), malcolmjames  
<https://uk.inaturalist.org/observations/82079992>