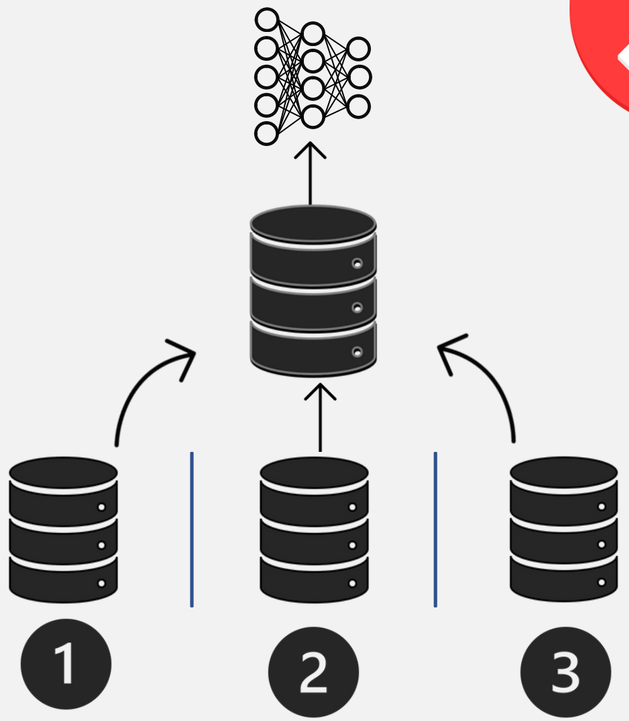
BRANCHKEY

FEDERATED LEARNING PLATFORM

DATA-CENTRED LEARNING DOESN'T SCALE

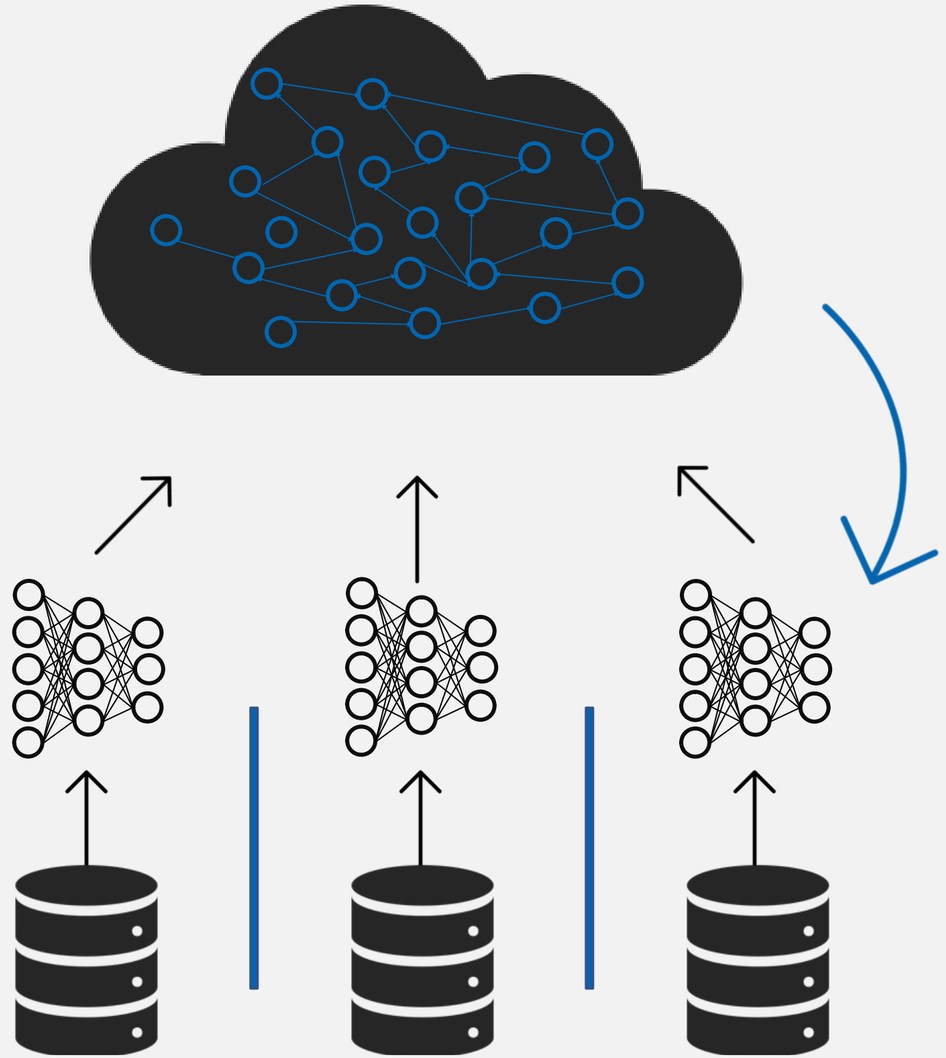


Centralising data comes with issues:

1. **Privacy Constraints -** Moving data around carries regulatory restrictions, risk of breaches, or unwanted usage
2. **Logistical Issues -** Large amounts of data can be expensive to transmit, or for low-power edge devices impossible
3. **Technical Challenges -** Preparing disjoint datasources for centralisation, connecting machine learners, and processing is difficult

EXTRACTING INSIGHTS ARE KEY

- We connect isolated machine learning agents and **distribute insights**
- Share key information represented as **model parameters**
- Raw data isn’t interesting, insights and inference from AI drive business value
- Keep **raw data protected** inside organisations

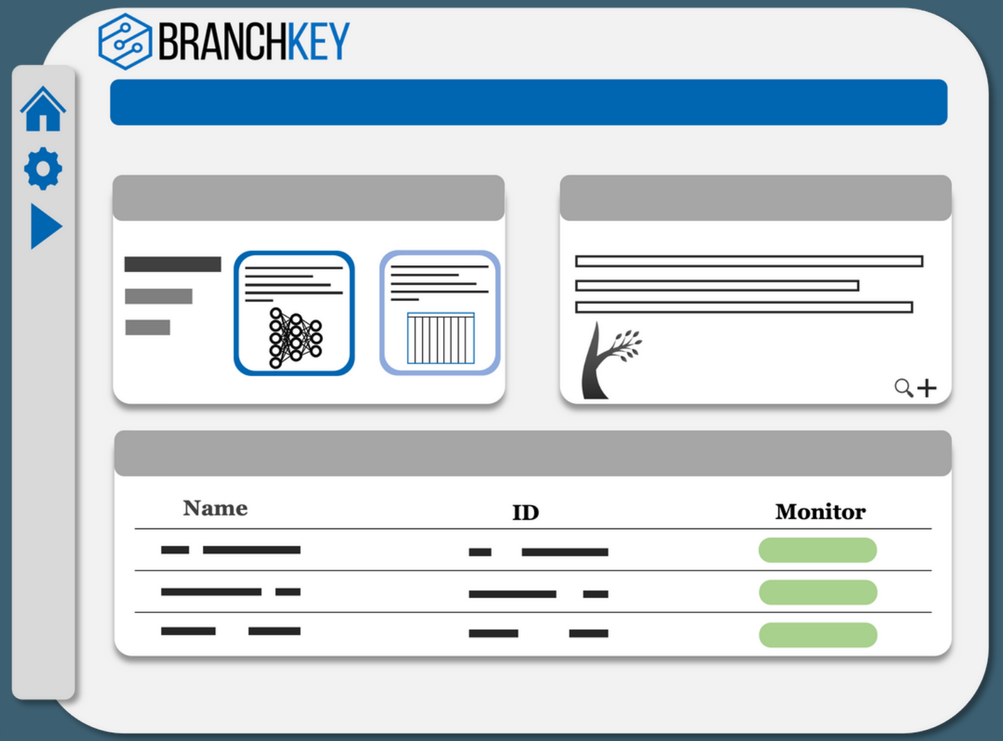


FEDERATE MACHINE LEARNING NODES

- We offer a **Federated Learning platform**
- Each Branch is a federation of connected machine learning Leaf-Nodes
- Each Leaf-Node is learning from **segregated datasets**
- We **aggregate** these learnings across the Branch

MANAGE FEDERATION GROWTH

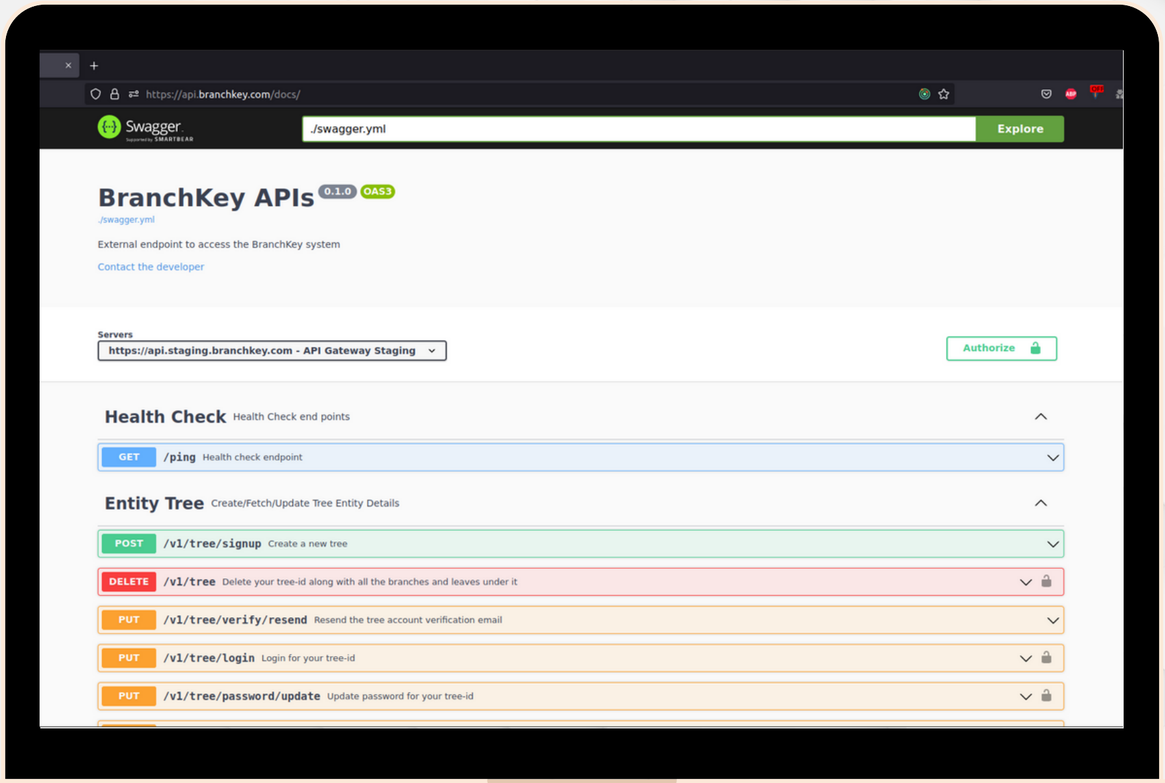
- Manage your Leaf-Node **learning cycles**
- **Monitor Performance** over time and tune parameters
- Track Leaf-Node **History** for inconsistency and **Audit trails**
- **Meta-learn** Leaf-Node behaviour
- Connect multiple data sources and optimise for **Scale**



UNIVERSAL INTERFACES

- Our system is **model and sector agnostic**
- **No vendor lock-in** - our systems are built to be compatible not exclusive
- **No data access** - never send your data off-location
- Access our full range of REST API's for **finer control**

https://api.branchkey.com/docs/



PYTHON SDK

- Integrate the BranchKey python client with your **existing workflow**
- Connect with your branch manager through an easy to use package

Upload

Download

`$ pip install branchkey`

```python
from branchkey import Client
from GenericModel import Model

credentials = {"leaf_name": "guest", "leaf_password": "abc123", "tree_id": "tree-1", "branch_id": "group-
# initialise the client
c = Client(credentials)
# login and authenticate your credentials
c.login()
# Generic Model example
model = Model()
for i in range(42):
    model.run_model()
    with open("./test.npy", "wb") as f:
        np.save(f, model.parameters())
    c.file_upload("test.npy")
    if not c.queue.empty():
        mesg = json.loads(clients[ds_idx].queue.get(block=False))
        c.file_download(mesg['aggregation_id']))
        new_params = np.load("./aggregated_output/" + mesg['aggregation_id'])
        model.set_parameters(new_params)
```

client.py hosted with ❤ by GitHub view raw

PRICING

Basic
Limited Usage

For getting started

- Use of Federated Learning Tool Suite
- Fair Usage Transfer Rates
- Restricted Features
- Limited Storage
- Limited Support

Premium
€ 3.000, - per month

For Proof-Of-Concept and early-stage projects

- Everything from Basic plus:
- Priority Transfer Rates
- Premium Model Storage
- Access to Premium Features
- Performance Monitoring
- Meta-Learning intelligence
- Business Level Support
- Limited Feature Requests

Enterprise
€€€

For projects that require more features

- Everything from Premium plus:
- Priority Feature Requests
- Custom Transfer Rates
- Custom Service Level Agreement
- Custom Support

PARTNERS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HYPERIONLAB
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Rubicon
Netherlands Enterprise Agency
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VISION

A world where humans focus on the bigger problems and machines collaborate with us and each other to solve them.

MISSION

To facilitate an effective collaboration between humans and machines.

BRANCHKEY

COLLABORATIVE MACHINE LEARNING MADE POSSIBLE

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