DE·CIX

Awesome for 20 years

jAtlasX

Access RIPE Atlas through Java

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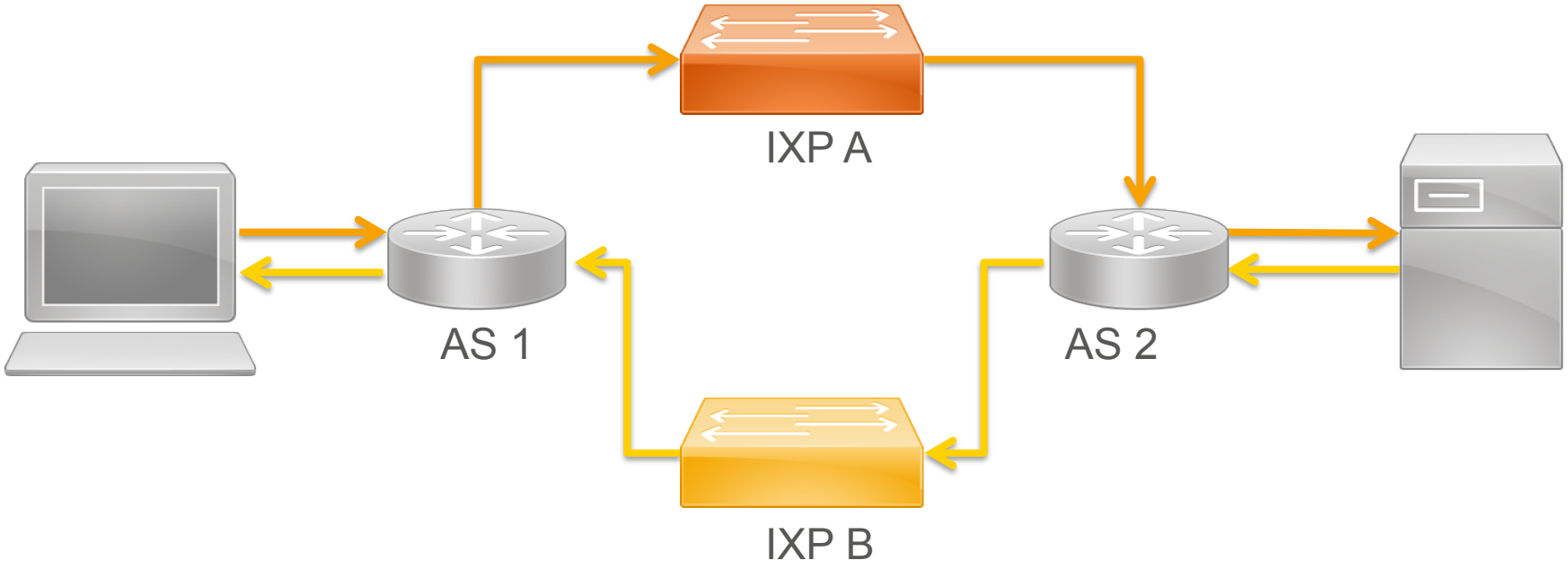
Motivation

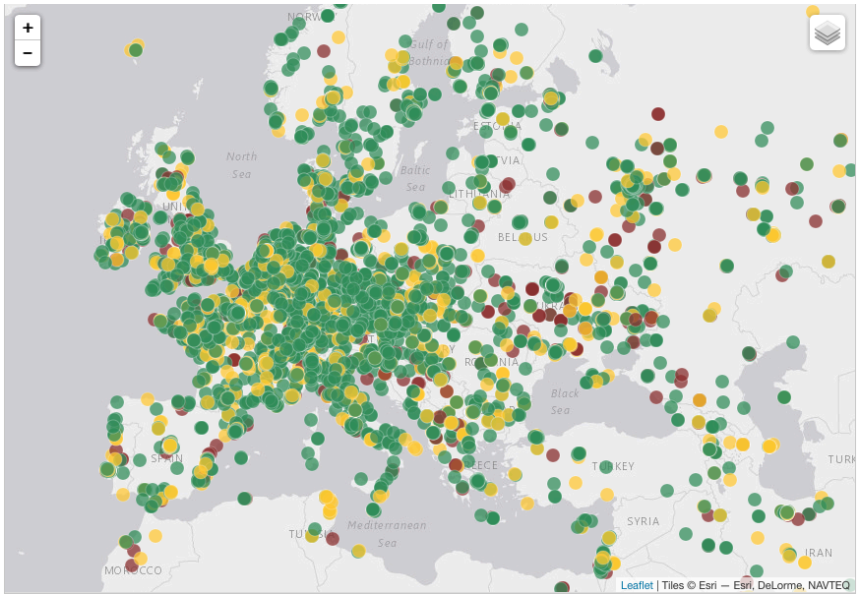
- Measure the occurrence of asymmetric routing paths
- Here asymmetric is defined as traversing different IXPs
- Perform large scale AS to AS traceroute measurements



Selecting the Right Tool

» DE-CIX selected RIPE Atlas because of:

1. Extensive coverage of probes
2. Built-in traceroute measurement
3. Easy to access REST-API
4. Easy to obtain measurement results



Create a Traceroute Measurement

» Easy way of creating a new traceroute measurement via a Java class:

```
Measurement simpleMeasurement = new TracerouteMeasurement(apiKey);
Long probeID = 21931L;

Long measurementID = simpleMeasurement.createMeasurement(probeID,
 "8.8.8.8", "jAtlasX_test_measurement");
```

» You just need:

- » An API-Key for RIPE Atlas
- » ProbeID for the source of the traceroute
- » IP-address of your target

How to find your ProbeID?

1. You can find probes by AS numbers:

```
public static List<Probe> gatherProbesByASN(long asn)
```

» It will return a list of probes located at inside the network of the given AS

2. How to find the IP address of a target probe:

```
public static IpAddress gatherProbeIPbyID(long id)
```

» It will return you the current IP address of the probe with the given ID.

» Feature request: Specify a probe as a target via the ID

Parse Responses

```
public interface ResponseHandler<T>{
        public List<T> handleResponse(String json);
}
```

jAtlasX implements various handler:

- MeasurementIDHandler – extracts the ID of a measurement
- ProbeHandler – extracts the IP address of a requested probe
- ProbeListHandler – extracts probes from a list of probes for an ASN
- TracerouteHandler – extracts the hop-by-hop path of a traceroute measurement

TODO List

- [x] **Make jAtlasX available as open source:** https://github.com/de-cix/jAtlasX
- [x] **Apache 2.0 license**
- [x] **Invite people to give jAtlasX a try**
- [ ] Create measurements with multiple probes
- [ ] Support for additional measurements: DNS, HTTP, ….

- [ ] **Get a probe if you do not host one yet**

```
public static void main(String[] args){
            Please ask = new Question();
            Consider your = new Contribution();
      }
```

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