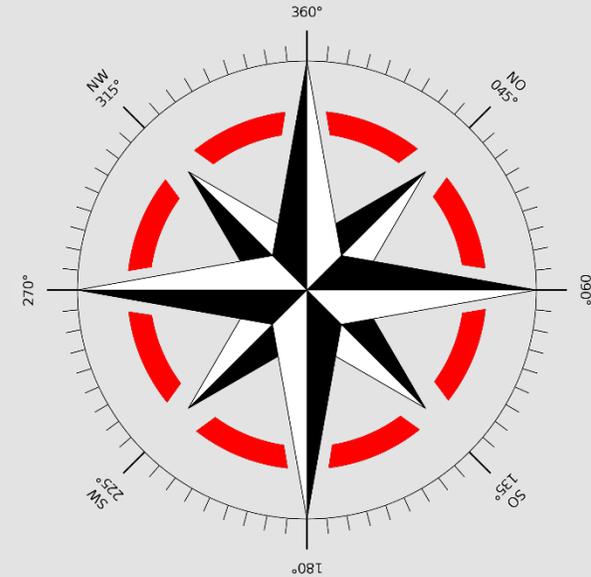# TheThingsNetwork – DE Cluster

Ein TTN-Cluster - von den deutschen COMs - für die deutschen COMs - für Alle

Wer sind wir?

- Als im April 2020 auf Grund eines Fehlers im TTN-System sich etwa 3500 TTN-Gateways auf der Lokation 0°N, 0°O wiederfanden entstand die Idee von TTN Null Island.

- Was zunächst als Gag auf Twitter begann entwickelte sich mit Unterstützung von TTN zu einer offiziellen Community.

- Getragen wird diese Community von einigen Enthusiasten und Netzwerkern im eigentlichen Sinne als auch im Sinne von TTN

THE THINGS NETWORK NULL-ISLAND

Wie wollen wir das tun?

THE THINGS NETWORK NULL-ISLAND

- Q: On May, 17th it was recognised while performing some mapping activities that one of my gateways suddenly disappeared from normal location and appeared back south of Ghana. Later it was figured out, that the coordinates for that is <u>0 N, 0 E.</u> Tests have been tried to be done in console in the beginning and it took very long to get an answer and later it ended up with an 502 error.

  This behaviours have been reported by some members of different communities via Twitter addressing @TheThingsNetwork. Unfortunately @TheThingsNetwork didn't respond at all. The problem went on for approx 24 hours without any response.

- A: We're always very sorry for routing interruptions in the community network. We know how many rely on it. Since the May 17th incident, we improved quite a few things internally in our operations team, and externally in how we communicate about outages.
  - Slack: use the community network Slack's #ops channel
  - Twitter: follow https://twitter.com/ttnstatus
  - Check service status and subscribe to changes here: https://status.thethings.network/

Wie wollen wir das tun?

- Q: Some community members started a first conference to discuss the thought to initiate a German Chirp-Stack. We made some tests in order to get experiences and to investigated capabilities.

- A: As much as I understand the first thoughts of "I can do this myself" and "how hard can it be", setting up ChirpStack is a dead end in the long term for many different reasons. It need operations and maintenance too, it's not scalable, its design is flawed, it's not backed by an organization on a mission to make LoRaWAN publicly available, etc

THE THINGS
N E T W O R K
NULL-ISLAND

Wie wollen wir das tun?

- Q: In the second web-conference with approx 20 members out of 15 German TTN communities (you see interest increased) came together and discussed if that way would be feasible and if it would help us to stabilise the situation. We had have some headaches while we thought deeply about the TTIG gateways as they don't except a second target as the MikroTik gateways do.

- A: Having two upstreams on gateways is also not a solution unfortunately. For example, we track downlink scheduling in the network. If there's another network using the same gateway, you may get conflicts on downlink scheduling, or use too much airtime so you violate duty-cycle regulations.

THE THINGS
NETWORK
NULL-ISLAND

Wie wollen wir das tun?

- Q: As our concrete idea we would like to ask for or suggest a German TTN network which could be addressed like de.thethings.network instead eu.thethings.network and which shall be maintained by some members of German communities in full alignment with TheThingsNetwork. We don't want to implement a separate network. We just want to help that for which reasons ever a quick reaction as well as redundancy can be provided if somethings doesn't work.

- A: This is indeed the way to go. Don't get me wrong, I understand your line of thinking very well, and I'm happy that you came to this conclusion.

- The initial idea of The Things Network was to decentralize it much more than we did in the end, with V2. We currently have four TTN Foundation operated clusters and three community operated clusters (Switch, Meshed and Digital Catapult). The reason why we never expanded this further, was the enormous hassle to set this up, both for the community and for our operations team.

THE THINGS
NETWORK
NULL-ISLAND

Wie wollen wir das tun?

THE THINGS NETWORK NULL-ISLAND

- With the migration to V3 on the community network coming up, this becomes relevant again and we definitely want to move forward. In fact, I also have a request from a collective of Polish, South African and Indian communities to do the same.

- Technically it all works via Packet Broker by the way; you will be able to set up The Things Enterprise Stack (yes, the open source distribution lacks scalability features) but then The Things Network branded, with a license to use it for the community network. There's also a legal agreement that basically enforces the manifest (https://github.com/TheThingsNetwork/manifest).

Wie wollen wir das tun?

Johan Stokking
Aw: German TTN Cluster
An: Jörg Martin

📁 Eingang - iCloud   8. Juli 2020 um 18:35

JS

Hi Jörg,

Unfortunately I can't be there tonight, but I wanted to assure you this way that TTI doesn't charge a licensing fee for operating a TTN cluster.

Best is for us to deal with (another) foundation or association and that we put the TTN manifest in a legal document between TTN Foundation and the German initiative.

As for operations, that is to be managed by you. We only provide Kubernetes templates, config files and we sign certificates for Packet Broker and other stuff as necessary.

So operating a public cluster is part of building the network, that we build together.

Say hi on my behalf and enjoy the meeting,

Johan

THE THINGS NETWORK
NULL-ISLAND

Kontakt:

@nottheedge

nottheedge