

KubeEdge update - Akraino Technical Meetings – Fall 2020

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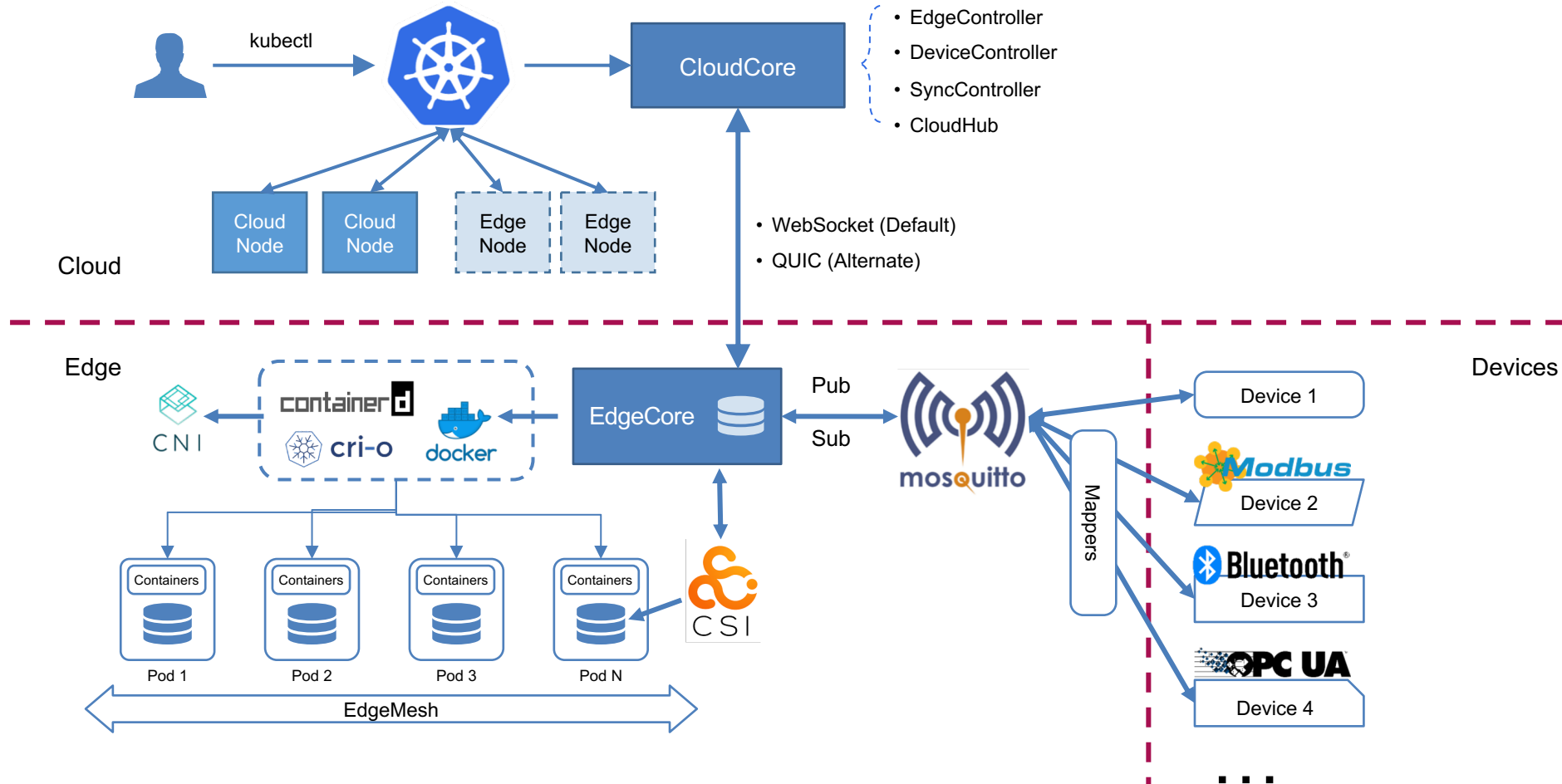
Background

- [KubeEdge](#) : graduated from CNCF Sandbox, entered Incubator in September 2020.
- **Major challenges resolved for edge computing:**
 - network reliability and bandwidth limit between cloud and edge,
 - resource constraint at edge,
 - highly distributed and heterogeneous device management.
- **KubeEdge provides**
 - **Seamless Cloud-Edge Communication** for both metadata and data
 - **Edge Autonomy:** Autonomous operation of Edge even during disconnection from cloud.
 - **Low Resource Ready:** KubeEdge can work in constrained resource situations (low memory, low bandwidth, low compute)
 - **Simplified Device Communication:** Easy communication between application and devices for IOT and IIOT

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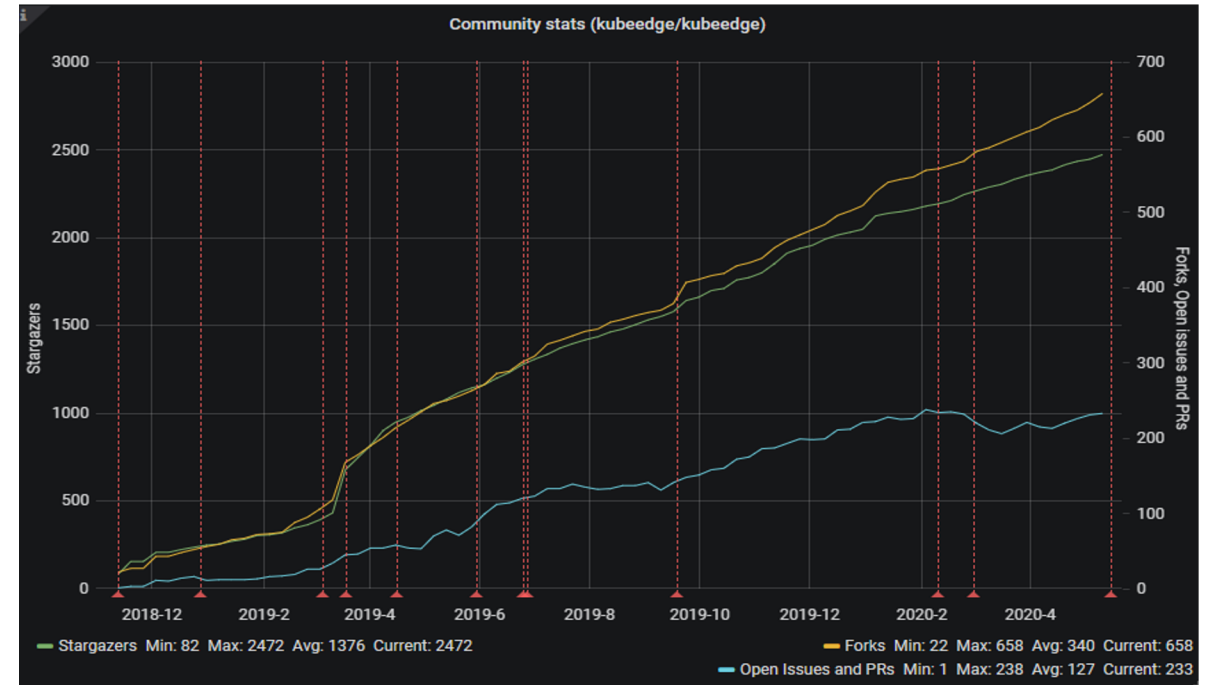


KubeEdge Architecture



Community growth

- Entered CNCF Incubation in Sept 2020
- Continuous momentum
 - Num of Contributors: 30 => **300+**
 - Github Stars: 400+ => **2800+**
 - Github Forks: 100+ => **780+**
 - Contributing member organizations: 1 => **25+**
 - Maintainers: 7 (1 company) => **14** (5 companies)
- Cross community collaboration
 - K8s iot edge WG
 - Akraino
 - ELIOT BP Family
 - KubeEdge Edge Service BP



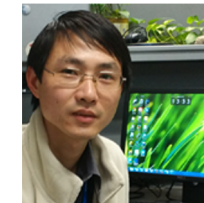
2019 Top New Contributors



Jan Unterbrink
inovex.de



Jie Zhang
China Unicom
Cloud Data



Dave Chen
ARM



Fei Xu
Huawei



Contribution and Adoption

- Contributing organizations including:

- IOT & Hardware:



- Carriers/Telco:



- IT Service Providers:



- Cloud Providers:



- Academic:



- 20+ Adopters:

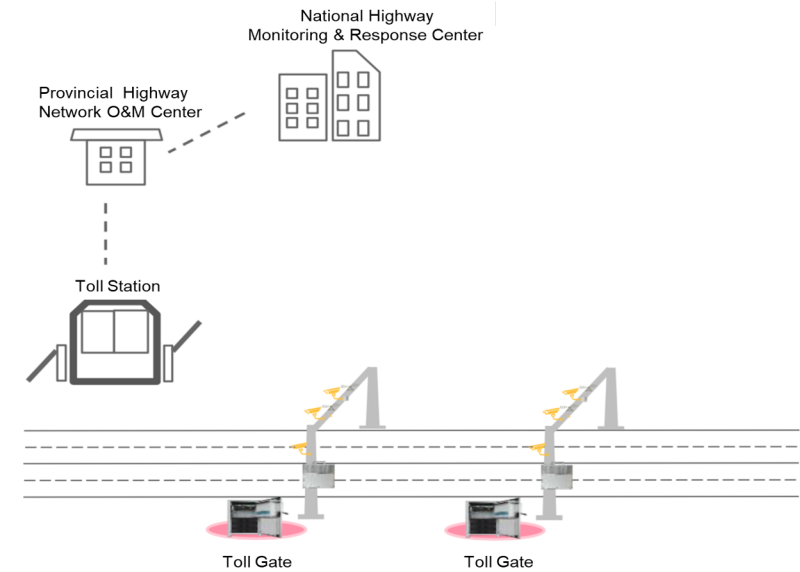
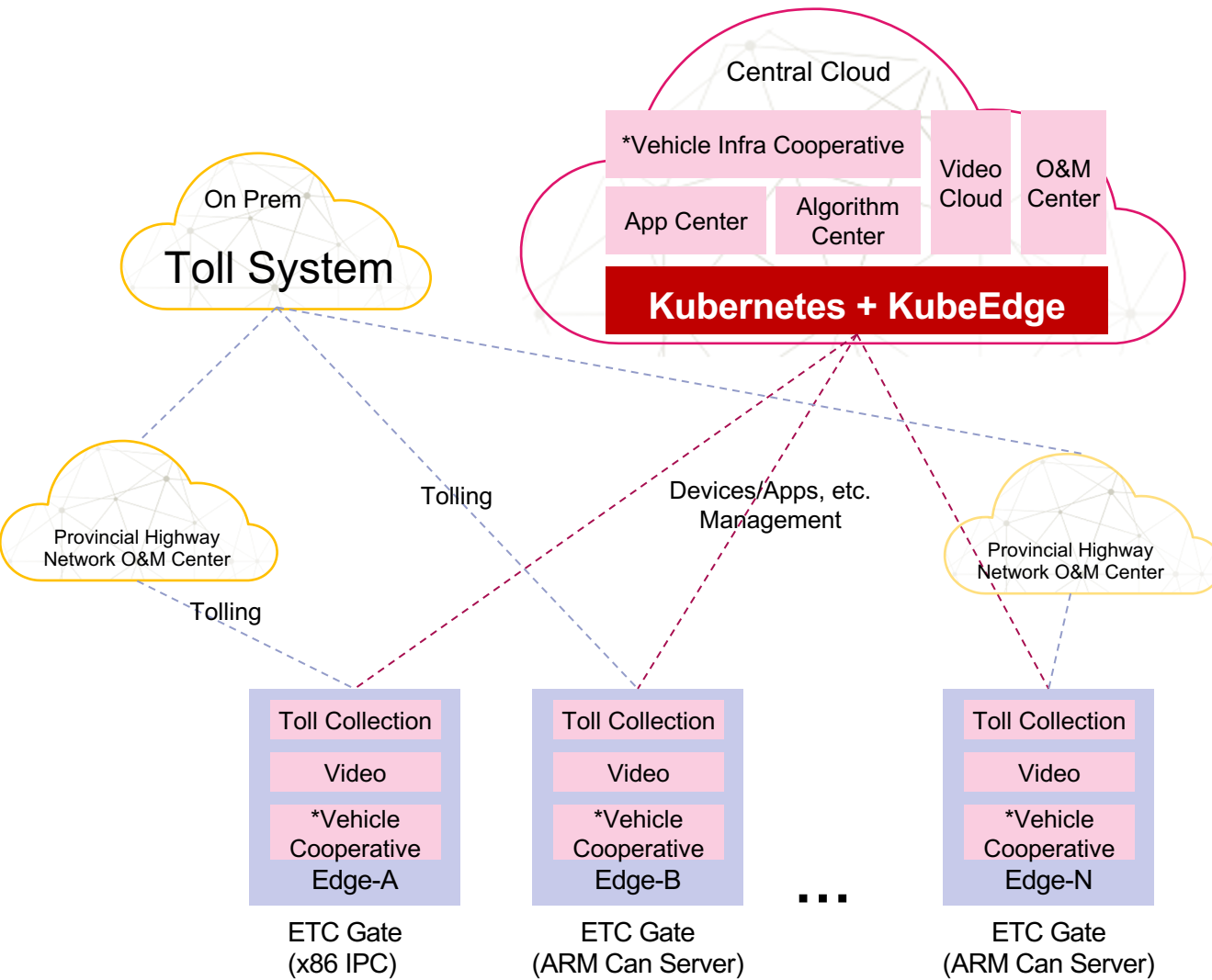
- <https://github.com/kubeedge/kubeedge/blob/master/ADOPTERS.md>

- **Already in production:**

- Raisecom
- WoCloud
- Xinghai IoT
- KubeSphere
- HUAWEI CLOUD
- Others under confirmation to publish name



User Adoption – Highway ETC System

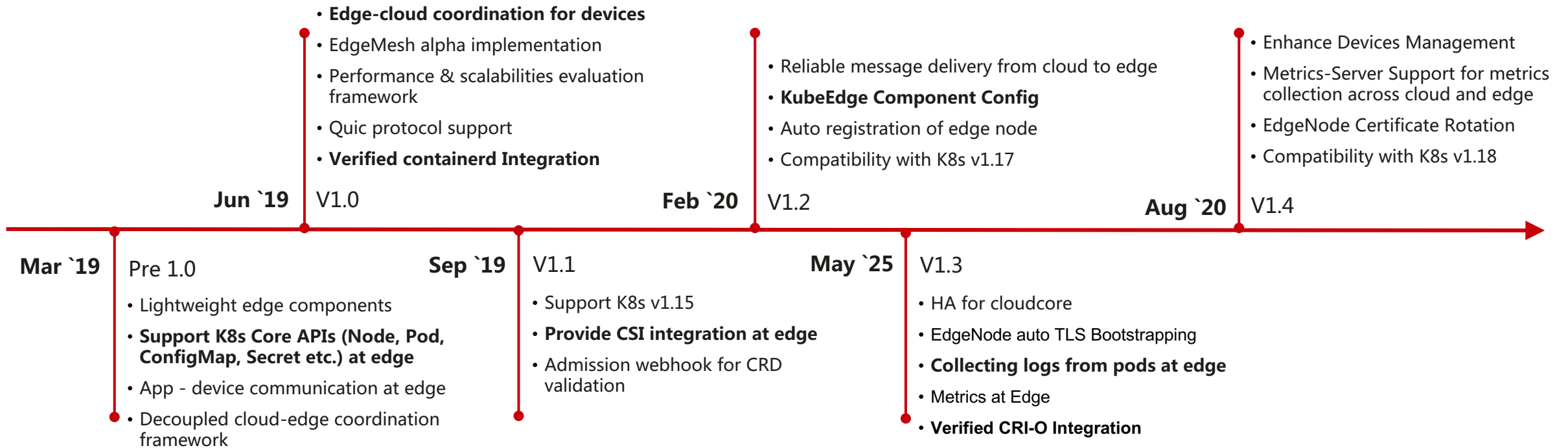


Benefits

- **50k+ edge nodes** Managed by KubeEdge
- **500k+ containers** in total
- 300 million data records per day
- Time used passing through toll station
 - **15s => 2s** in avg. per car
 - **29s => 3s** in avg. per truck



Release Journey – quarterly release



Welcome to join KubeEdge community

- Project website: <https://kubedge.io/>
- Code repository: <https://github.com/kubedge/kubedge>
- Slack: <https://kubedge.slack.com> | [Get invited to join here](#)
- Mailing list: <https://groups.google.com/forum/#!forum/kubedge>
- Meeting Note: <http://bit.ly/kubedge-meeting-notes>
- Meeting Records: <https://www.youtube.com/playlist?list=PLQtIO1kVWGXkRGkjSrLGEPJODoPb8s5FM>

Community Meeting:

Europe Time: Wednesdays at 16:30-17:30 Beijing Time (biweekly). ([Convert to your timezone.](#))

Pacific Time: Wednesdays at 10:00-11:00 Beijing Time (biweekly). ([Convert to your timezone.](#))

[Meeting Calendar](#) | [Subscribe](#)

Meeting ID: <https://zoom.us/my/kubedge>



Thank you.