

R4 Release Notes of IEC Type 5: SmartNIC for Integrated Edge Cloud (IEC) Blueprint Family

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Summary

CT based on OVS-DPDK offload into SmartNIC

what is released

components of the release (Akraino new)

DPDK version 20.11

Open vSwitch 2.14.1

LINUX Kernel 5.4

SmartNIC BlueField 2

dependencies of the release (upstream version, patches)

N/A

differences from the previous version

Adding a new function CT (connection tracking) offloaded and release versions of hardware and software are upgraded.

Upgrade Procedures

N/A

Release Data

Enhancements

In R3, the community version of Open vSwitch does not work well for VXLAN decap/encap offload and we open-sourced our implementation of Open vSwitch with VXLAN decap/encap offload on BlueField SmartNIC card.

Currently, the community version of Open vSwitch does not work well for connection tracking offload. In R4, we have fulfilled this offload into SmartNIC.

Functionality changes

N/A

New Features

N/A

Version change

Module version changes

N/A

Document Version Changes

N/A

Deliverable

Release Software	Version	Link
IEC	Version 2.0	https://gerrit.akraino.org/r/gitweb?p=iec.git;a=tree;f=src/type5_SmartNIC Chao Han
DPDK	V20.11	https://doc.dpdk.org/guides-20.11/ http://dpdk.org/git/dpdk-stable
OVS	v2.14.1	https://github.com/bytedance/ovs-dpdk this version is applied in R3 While in R4, we use the mellanox version which in the process of open source in the community.

Software Deliverable

OVS-DPDK with VXLAN ENCAP/DECAP offload.

In R4, CT based OVS-DPDK offload

Documentation Deliverable

N/A

Fixed Issues and Bugs

N/A

Known Limitations, Issues and Workarounds

The OVS code only supports offloading a subset of OpenFlow actions.

The evaluation OpenFlow ruleset for SmartNIC will only contain VXLAN decap/encap actions.

The states of connection tracking only cover several kinds generally used.

References

N/A