

3GPP SA Rel-18 Workshop, September 9-10 2021

KDDI Views on Rel-18

KDDI Corporation



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Overview

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4 Areas to proceed NW Slicing work

1. Features aiming multi-vendor, on-demand Network Slicing
2. Enhancements for low latency slicing
3. Enhancements for NWDAF
4. Further integration of 3GPP system and Edge Cloud

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Conclusion

- It's a “Break of dawn” of 5GSA commercial service in Japan. One of the most significant service enablers available with 5GSA launch is Network Slicing
- A lot of features related to Network Slicing have been standardized in a variety of bodies
- However, from an operator perspective, there are still remaining issues to achieve the ultimate goal so called “Network Slice as a Service”
 - It is described in [SP-210817 LS from GSMA NG: New Whitepaper: 'E2E Network Slicing Architecture'](#)
- For further enrichment of customer experience, E2E integrated slice management i.e., UE-RAN-CN-TN-OAM-Edge is crucial in particular to the coordination/interaction between UE/application and network
- To pursue the goal, KDDI proposes to proceed the works in 4 areas

- 1. Features aiming multi-vendor, on-demand Network Slicing**
- 2. Enhancements for low latency slicing**
- 3. Enhancements for NWDAF**
- 4. Further integration of 3GPP system and Edge Cloud**



1. Features aiming multi-vendor, on-demand Network Slicing

- These features are essential for achieving of NW Slice as a Service e.g., optimal deployment on the service requirement bases, finer granularity of the slice or E2E service provision per UE application traffic category bases
 - ✓ New SID on Network Slicing Phase 3. (FS_eNS_Ph3)
 - ✓ Study on enhancement of 5G UE Policy. (FS_eUEPO)



2. Enhancements for low latency slicing

- Services require ultimate low latency are key differentiators in 5G era. NW slices should be designed and deployed to meet specific customers' requirements addressing low latency applications.
- These features address e.g., optimal deployment of UPF for URLLC service or to study specialized architecture for ultimate low latency services
 - ✓ Study on 5G Timing Resiliency and TSC&URLLC enhancements (FS_5GTTUe)
 - ✓ Study on architecture enhancement for XR and media services (FS_XRM)



3. Enhancements for NWDAF

- Since standardized in Rel-15 initially, features available through NWDAF have been enriched in every release.
- These features address enhancements for analysis of UE/application aspects and U-plane information/statistics
 - ✓ Study on Enablers for Network Automation for 5G - phase 3 (FS_eNA_ph3)
 - ✓ Study on UPF enhancement for control and SBA . (FS_UPCAS)

4. Further integration of 3GPP system and Edge Cloud

- Another approach for achievement of low latency capable system is the integration of Edge Cloud and 3GPP system
- These features address edge level exposure with regard to UE/application and LCS integrated NWDAF analysis
 - ✓ New SID on Enhancement of support for Edge Computing in 5G Core network - phase 2 (FS_eEDGE_5GC_ph2)
 - ✓ New SID on Enhancement to the 5GC LoCation Services Phase 3 (FS_eLCS_ph3)

- NW Slicing is one of the most significant service enablers
- Further enhancement is expected in Rel-18 SA2
- To achieve “NW Slicing as a Service”, KDDI proposes to put priorities on these items;

FS_eNS_Ph3, FS_eUEPO, FS_5GTTUe, FS_XRM, FS_eNA_ph3,
FS_UPCAS, FS_eEDGE_5GC_ph2, FS_eLCS_ph3

Thank you!

Tomorrow, Together

KDDI