**3GPP TSG-CT WG4 Meeting #102-eC4-211516**

**E-Meeting, 24th Feb – 05th Mar 2021** *Revision of 025, 504*

**Source: Huawei**

**Title: Pseudo-CR on Removing Key Issue #3**

**Spec: 3GPP TR 29.835v0.3.0**

**Agenda item: 6.1.4 (PortAl)**

**Document for: Decision**

**1. Reason for Change**

Currently, TR 29.835 contains a summary of conclusions for Key Issue #2. Similar table should be added also for the Key Issue #3. Also, title format should be aligned with KI#2.

CT4#102e however decided to remove KI#3 altogether and move its provisions into other Key Issues.

**2. Proposal**

It is proposed to agree the following changes to 3GPP TR 29.835v0.3.0.

\* \* \* First Change \* \* \* \*

## 5.2 Key Issue #1: Roaming/inter-domain scenario

### 5.2.1 Description of the use case

Key Issue #1 is to avert port number clashes in a roaming scenario and also non-roaming scenario when network elements are operated by different network administrations. Therefore, selected solution shall ensure that only the intended traffic will be received at the newly defined application ports across the inter-domain interfaces. The inter-domain scenarios cover the below interfaces:

- Roaming interfaces

- Any Inter PLMN interface

- RAN to CN interfaces, as for supporting RAN sharing use cases (single RAN shared by multiple PLMN's CN), the RAN to CN interface also falls into the category of inter-domain scenario.

### 5.2.2 Key issue definition

The IETF RFC 7605 [3] provides recommendations to designers of application and service protocols on how to use the transport protocol port number space and when to request a port assignment from IANA.

In this document, it is reminded that:

IANA assigns port numbers so that Internet endpoints do not need pairwise, explicit coordination of the meaning of their port numbers. This is the primary reason for requesting port number assignment by IANA: to have a common agreement between all endpoints on the Internet as to the default meaning of a port number, which provides the endpoints with a default port number for a particular protocol or service.

It is also clarified that:

Port numbers can also be used for other purposes. Assigned port numbers can simplify end-system configuration, so that individual installations do not need to coordinate their use of arbitrary port numbers. Such assignments may also have the effect of simplifying firewall management, so that a single, fixed firewall configuration can either permit or deny a service that uses the assigned ports.

In typical roaming scenarios, three or more administrative domains can be crossed: visited and home PLMN, one or more IPX providers connecting together via an IPX peering point for traffic exchange between PLMNs. Operators and service providers may even decide to rely on the global connectivity provided by the public Internet for interconnection.

As roaming implies the need for a global configuration of the port to use for a particular protocol, it is strongly recommended for 3GPP to apply to IANA for assigned service name and port number for any protocol potentially supported by roaming interfaces when DNS-based solutions are not applicable.

In non-roaming scenarios, a given interface can still cross multiple domains. For instance, RAN can be supported by an IP-based network distinct from the one supporting the core network even if both are under the same PLMN, or in a RAN sharing case (i.e. same RAN is used by multiple PLMN's CN) the interface between RAN and CN also crosses multiple administrative domains. In such a case, it is also strongly recommended for 3GPP to apply to IANA for assigned service name and port number for any protocol potentially supported by inter-domain interfaces when DNS-based solutions are not applicable.

The study should also evaluate whether Dynamic/Private Port numbers range [49152 - 65535] and/or User Port number range [1024-49151] can be used for new 3GPP interfaces.

## 5.3 Key Issue #2: Intra-domain scenario

### 5.3.1 Description of the use case

Key Issue #2 is to avert port number clashes in intra-domain scenarios. Therefore, selected solution shall ensure that only the intended traffic will be received at the newly defined application ports within a given domain.

### 5.3.2 Key issue definition

In intra-domain scenarios, it needs to be ensured that newly defined application port number will not clash with the port numbers that are already in use (legacy 3GPP applications and also non-3GPP applications), or at least the solution should specify how to mitigate the problem. In other words, the solution needs to ensure that a newly introduced application entity that sends traffic to a certain port will always arrive at the intended application.

The study should also evaluate whether Dynamic/Private Port numbers range [49152 - 65535] and/or User Port number range [1024-49151] can be used for new 3GPP interfaces.

\* \* \* 2nd Change \* \* \* \*

\* \* \* End of Changes \* \* \* \*