**Agenda item:** 8.7

**Source:** Tencent Cloud

**Title: Application context relocation by reference**

**Document for** Discussion andAgreement

# Introduction

At one of the recent SA4’s MBS ad-hoc calls, the SA6 liaison response was shared that confirmed the following two concepts:

1. Each server/or server application that connects to an application client, is an EAS. Therefore, even if a container consists of multiple applications, each is considered a separate EAS.
2. The relocation of an application context can only occur through EES, i.e. the location of the storage is transferred from S-EAS to S-EES and then to T-EES and finally to T-EAS (EELManagedACR procedure).

# Discussion

# Currently supported application context transfer

TS23.558 in its EELManagedACR provides two methods for transferring the application context from S-EAS to T-EAS (TR23.558 clause 8.8.2.5):

*“10. The Application Context is transferred from S-EAS to the T-EAS at implementation specific time. In the case of EELManagedACR, the S-EES accesses the Application Context from the address as per step 1 and the S-EES and T-EES engage in the ACT from S-EAS to the T-EAS (obtained as per step 5) in a secure way. Further the T-EAS accesses the Application Context made available by the T-EES. If S-EAS performs the ACT directly with T-EAS, the specification of such process is out of scope of the present document.*

*NOTE 1: The Application Context is encrypted and protected by the application layer. The S-EES and the T-EES engage in the packet level transport of the Application Context and they have no visibility to the content of the Application Context.”*

One option is that while the S-EAS Application Context is accessible by S-EAS from its storage location, it seems that in EELManagedACR the transfer of the Application context is made by actual transfer of data in the following data flow:

S-EAS🡪S-EES🡪 T-EES🡪T-EAS

The other alternative is provided is the direct transfer of Application Context from S-EAS to T-EAS but that is not part of the standard.

# Transfer by reference

One additional alternative would be to use the EELManagedACR to exchange the connection information needed for the transfer between S-EAS and T-EAS through S-EES and T-EES but leave the actual transfer to S-EAS and T-EAS and outside of scope of the standardization. The value of this solution is that it provides a mechanism to signal the connection between two application servers without taking the burden of data transfer.

In this case, one approach would be to exchange the following information for the context relocation:

1. From S-EAS to T-EAS:
	1. Source address of the Application Context storage (which can be different than S\_EAS or T-EAS address)
	2. The unique Application Context ID
	3. The supported protocols
	4. Security information
	5. Expiration time
2. From T-EAS to A-EAS:
	1. Destination address of the Application Context storage
	2. The unique Application Context ID
	3. The supported protocols
	4. Security information
	5. Expiration time

Optionally, information c, d, and e, and any additional information can be stored in a scheme, and a scheme identifier is used to signal the scheme:

1. From S-EAS to T-EAS:
	1. Source address of the Application Context storage
	2. The unique Application Context ID
	3. Scheme-identifier
	4. Scheme
2. From T-EAS to A-EAS:
	1. Destination address of the Application Context storage
	2. The unique Application Context ID
	3. Scheme-identifier
	4. Scheme



# Proposal

We propose the following:

1. Include the following note in the dCR as the placeholder for further discussion at receiving the response from SA6:

Editor's Note: A liaison has been initiated with SA6 to discuss the possibility of extending the *EELManagedACR* procedure to support passing a reference to an offer of application context transfer. The parameters of this operation could include a unique transfer offer identifier, the endpoint address of the application context to be relocated, supported transfer protocols, security context, and expiration time of the transfer offer.