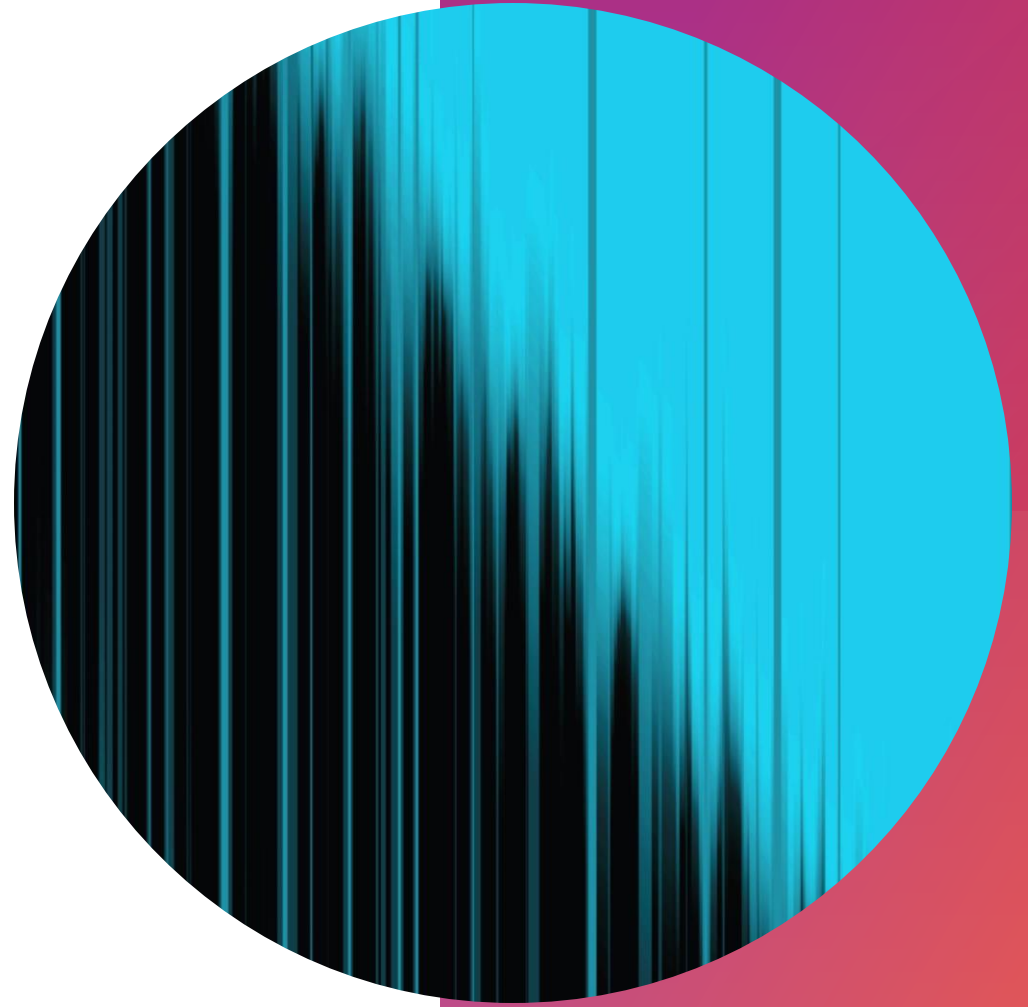


oneM2M

TinyIoT

ONEM2M TINYIOT SERVER

엄경호



# 이번 주 진행 상황

## I. ACME 테스트 기반 보완

# 테스트 목록

```
addTest(suite, TestAE('test_createAE'))
addTest(suite, TestAE('test_createAEUnderAE'))
addTest(suite, TestAE('test_createAEAgain'))
addTest(suite, TestAE('test_createAEWithExistingOriginator'))
addTest(suite, TestAE('test_retrieveAE'))
addTest(suite, TestAE('test_retrieveAEWithWrongOriginator'))
#addTest(suite, TestAE('test_attributesAE'))
#addTest(suite, TestAE('test_updateAELbl'))
addTest(suite, TestAE('test_updateAETy'))
addTest(suite, TestAE('test_updateAEPi'))
#addTest(suite, TestAE('test_updateAEUnknownAttribute'))
addTest(suite, TestAE('test_deleteAEByUnknownOriginator'))
addTest(suite, TestAE('test_deleteAEByAssignedOriginator'))
#addTest(suite, TestAE('test_createAEWrongCSZ'))
#addTest(suite, TestAE('test_createAECsz'))
#addTest(suite, TestAE('test_deleteAECsz'))
addTest(suite, TestAE('test_createAENoAPI'))
#addTest(suite, TestAE('test_createAEAPIWrongPrefix'))
addTest(suite, TestAE('test_createAEAPICorrectR'))
addTest(suite, TestAE('test_createAEAPICorrectN'))
#addTest(suite, TestAE('test_createAEAPIRVI3LowerCaseR'))
#addTest(suite, TestAE('test_createAEAPIRVI4LowerCaseFail'))
addTest(suite, TestAE('test_createAENoOriginator'))
addTest(suite, TestAE('test_createAEEmptyOriginator'))
addTest(suite, TestAE('test_createAEInvalidRNFail'))
```

Successfully executed tests: 16

[ACME] - Test Results

Test Suite	Count	Skipped	Errors	Times Exec   Sleep   Proc	Exec Time per Test   Request	Proc Time per Test   Request	Reque...
testAE	16	0	0	1.13...   0.00   0.1914	0.0708   0.0492	0.0120   0.0083	23
Totals	16	0	0	1.14...   0.00   0.2084	0.0718   0.0500	0.0130   0.0091	23

## 테스트 목록

```
addTest(suite, TestAE('test_createAE'))
addTest(suite, TestAE('test_createAEUnderAE'))
addTest(suite, TestAE('test_createAEAgain'))
addTest(suite, TestAE('test_createAEWithExistingOriginator'))
addTest(suite, TestAE('test_retrieveAE'))
addTest(suite, TestAE('test_retrieveAEWithWrongOriginator'))
#addTest(suite, TestAE('test_attributesAE'))
#addTest(suite, TestAE('test_updateAELbl'))
addTest(suite, TestAE('test_updateAETy'))
addTest(suite, TestAE('test_updateAEPi'))
#addTest(suite, TestAE('test_updateAEUnknownAttribute'))
addTest(suite, TestAE('test_deleteAEBByUnknownOriginator'))
addTest(suite, TestAE('test_deleteAEBByAssignedOriginator'))
#addTest(suite, TestAE('test_createAEWrongCSZ'))
#addTest(suite, TestAE('test_createAECSZ'))
#addTest(suite, TestAE('test_deleteAECSZ'))
addTest(suite, TestAE('test_createAENoAPI'))
#addTest(suite, TestAE('test_createAEAPIWrongPrefix'))
addTest(suite, TestAE('test_createAEAPICorrectR'))
addTest(suite, TestAE('test_createAEAPICorrectN'))
#addTest(suite, TestAE('test_createAEAPIRVI3LowerCaseR'))
#addTest(suite, TestAE('test_createAEAPIRVI4LowerCaseRFail'))
addTest(suite, TestAE('test_createAENoOriginator'))
addTest(suite, TestAE('test_createAEEEmptyOriginator'))
addTest(suite, TestAE('test_createAEInvalidRNFail'))
```

test\_createAE, test\_createAEUnderAE, test\_createAEAgain

기존 코드로 모두 통과

## 테스트 목록

```
addTest(suite, TestAE('test_createAE'))
addTest(suite, TestAE('test_createAEUnderAE'))
addTest(suite, TestAE('test_createAEGain'))
addTest(suite, TestAE('test_createAEWithExistingOriginator'))
addTest(suite, TestAE('test_retrieveAE'))
addTest(suite, TestAE('test_retrieveAEWithWrongOriginator'))
#addTest(suite, TestAE('test_attributesAE'))
#addTest(suite, TestAE('test_updateAELbl'))
addTest(suite, TestAE('test_updateAETy'))
addTest(suite, TestAE('test_updateAEPi'))
#addTest(suite, TestAE('test_updateAEUnknownAttribute'))
addTest(suite, TestAE('test_deleteAEBByUnknownOriginator'))
addTest(suite, TestAE('test_deleteAEBByAssignedOriginator'))
#addTest(suite, TestAE('test_createAEWrongCSZ'))
#addTest(suite, TestAE('test_createAECSZ'))
#addTest(suite, TestAE('test_deleteAECSZ'))
addTest(suite, TestAE('test_createAENoAPI'))
#addTest(suite, TestAE('test_createAEAPIWrongPrefix'))
addTest(suite, TestAE('test_createAEAPICorrectR'))
addTest(suite, TestAE('test_createAEAPICorrectN'))
#addTest(suite, TestAE('test_createAEAPIRVI3LowerCaseR'))
#addTest(suite, TestAE('test_createAEAPIRVI4LowerCaseRFail'))
addTest(suite, TestAE('test_createAENoOriginator'))
addTest(suite, TestAE('test_createAEEEmptyOriginator'))
addTest(suite, TestAE('test_createAEInvalidRNFail'))
```

test\_createAEWithExistingOriginator

aei와 ri 를 Originator와 연관있는 값으로 설정 후  
X-M2M-Origin과 ri를 비교하여 중복 여부 검사

test\_retrieveAE

원래도 통과하였지만 원래는 X-M2M-Origin 값에 따라  
deny를 하는 경우도 고려해야함

test\_retrieveAEWithWrongOriginator

X-M2M-Origin 값과 ri를 비교하여 권한 검사

## 테스트 목록

```
addTest(suite, TestAE('test_createAE'))
addTest(suite, TestAE('test_createAEUnderAE'))
addTest(suite, TestAE('test_createAEAgain'))
addTest(suite, TestAE('test_createAEWithExistingOriginator'))
addTest(suite, TestAE('test_retrieveAE'))
addTest(suite, TestAE('test_retrieveAEWithWrongOriginator'))
#addTest(suite, TestAE('test_attributesAE'))
#addTest(suite, TestAE('test_updateAELbl'))
addTest(suite, TestAE('test_updateAETy'))
addTest(suite, TestAE('test_updateAEPi'))
#addTest(suite, TestAE('test_updateAEUnknownAttribute'))
addTest(suite, TestAE('test_deleteAEBByUnknownOriginator'))
addTest(suite, TestAE('test_deleteAEBByAssignedOriginator'))
#addTest(suite, TestAE('test_createAEWrongCSZ'))
#addTest(suite, TestAE('test_createAECSZ'))
#addTest(suite, TestAE('test_deleteAECSZ'))
addTest(suite, TestAE('test_createAENoAPI'))
#addTest(suite, TestAE('test_createAEAPIWrongPrefix'))
addTest(suite, TestAE('test_createAEAPICorrectR'))
addTest(suite, TestAE('test_createAEAPICorrectN'))
#addTest(suite, TestAE('test_createAEAPIRVI3LowerCaseR'))
#addTest(suite, TestAE('test_createAEAPIRVI4LowerCaseRFail'))
addTest(suite, TestAE('test_createAENoOriginator'))
addTest(suite, TestAE('test_createAEEEmptyOriginator'))
addTest(suite, TestAE('test_createAEInvalidRNFail'))
```

test\_attributesAE

`srv` attribute가 존재하지 않아서 테스트 불가

test\_updateAELbl

`lbl` attribute가 존재하지 않아서 테스트 불가

## 테스트 목록

```
addTest(suite, TestAE('test_createAE'))
addTest(suite, TestAE('test_createAEUnderAE'))
addTest(suite, TestAE('test_createAEGain'))
addTest(suite, TestAE('test_createAEWithExistingOriginator'))
addTest(suite, TestAE('test_retrieveAE'))
addTest(suite, TestAE('test_retrieveAEWithWrongOriginator'))
#addTest(suite, TestAE('test_attributesAE'))
#addTest(suite, TestAE('test_updateAELbl'))
addTest(suite, TestAE('test_updateAETy'))
addTest(suite, TestAE('test_updateAEPi'))
#addTest(suite, TestAE('test_updateAEUnknownAttribute'))
addTest(suite, TestAE('test_deleteAEBByUnknownOriginator'))
addTest(suite, TestAE('test_deleteAEBByAssignedOriginator'))
#addTest(suite, TestAE('test_createAEWrongCSZ'))
#addTest(suite, TestAE('test_createAECSZ'))
#addTest(suite, TestAE('test_deleteAECSZ'))
addTest(suite, TestAE('test_createAENoAPI'))
#addTest(suite, TestAE('test_createAEAPIWrongPrefix'))
addTest(suite, TestAE('test_createAEAPICorrectR'))
addTest(suite, TestAE('test_createAEAPICorrectN'))
#addTest(suite, TestAE('test_createAEAPIRVI3LowerCaseR'))
#addTest(suite, TestAE('test_createAEAPIRVI4LowerCaseRFail'))
addTest(suite, TestAE('test_createAENoOriginator'))
addTest(suite, TestAE('test_createAEEEmptyOriginator'))
addTest(suite, TestAE('test_createAEInvalidRNFail'))
```

test\_updateAETy, test\_updateAEPi

두 테스트 모두 업데이트가 허용되지 않는 attribute에 대한 요청이 오면 deny하는 테스트, cJSON을 통해 key 값 존재 여부를 확인



## 테스트 목록

```
addTest(suite, TestAE('test_createAE'))
addTest(suite, TestAE('test_createAEUnderAE'))
addTest(suite, TestAE('test_createAEAgain'))
addTest(suite, TestAE('test_createAEWithExistingOriginator'))
addTest(suite, TestAE('test_retrieveAE'))
addTest(suite, TestAE('test_retrieveAEWithWrongOriginator'))
#addTest(suite, TestAE('test_attributesAE'))
#addTest(suite, TestAE('test_updateAELbl'))
addTest(suite, TestAE('test_updateAETy'))
addTest(suite, TestAE('test_updateAEPi'))
#addTest(suite, TestAE('test_updateAEUnknownAttribute'))
addTest(suite, TestAE('test_deleteAEBByUnknownOriginator'))
addTest(suite, TestAE('test_deleteAEBByAssignedOriginator'))
#addTest(suite, TestAE('test_createAEWrongCSZ'))
#addTest(suite, TestAE('test_createAECSZ'))
#addTest(suite, TestAE('test_deleteAECSZ'))
addTest(suite, TestAE('test_createAENoAPI'))
#addTest(suite, TestAE('test_createAEAPIWrongPrefix'))
addTest(suite, TestAE('test_createAEAPICorrectR'))
addTest(suite, TestAE('test_createAEAPICorrectN'))
#addTest(suite, TestAE('test_createAEAPIRVI3LowerCaseR'))
#addTest(suite, TestAE('test_createAEAPIRVI4LowerCaseRFail'))
addTest(suite, TestAE('test_createAENoOriginator'))
addTest(suite, TestAE('test_createAEEEmptyOriginator'))
addTest(suite, TestAE('test_createAEInvalidRNFail'))
```

test\_updateAEUnknownAttribute

"wrong"과 같은 무관한 attribute가 json에 포함되면  
deny하는 테스트이지만 아직 통과를 위한 보완을 하지 않음



## 테스트 목록

```
addTest(suite, TestAE('test_createAE'))
addTest(suite, TestAE('test_createAEUnderAE'))
addTest(suite, TestAE('test_createAEAgain'))
addTest(suite, TestAE('test_createAEWithExistingOriginator'))
addTest(suite, TestAE('test_retrieveAE'))
addTest(suite, TestAE('test_retrieveAEWithWrongOriginator'))
#addTest(suite, TestAE('test_attributesAE'))
#addTest(suite, TestAE('test_updateAELbl'))
addTest(suite, TestAE('test_updateAETy'))
addTest(suite, TestAE('test_updateAEPi'))
#addTest(suite, TestAE('test_updateAEUnknownAttribute'))
addTest(suite, TestAE('test_deleteAEBByUnknownOriginator'))
addTest(suite, TestAE('test_deleteAEBByAssignedOriginator'))
#addTest(suite, TestAE('test_createAEMongCSZ'))
#addTest(suite, TestAE('test_createAECSZ'))
#addTest(suite, TestAE('test_deleteAECSZ'))
addTest(suite, TestAE('test_createAENoAPI'))
#addTest(suite, TestAE('test_createAEAPIWrongPrefix'))
addTest(suite, TestAE('test_createAEAPICorrectR'))
addTest(suite, TestAE('test_createAEAPICorrectN'))
#addTest(suite, TestAE('test_createAEAPIRVI3LowerCaseR'))
#addTest(suite, TestAE('test_createAEAPIRVI4LowerCaseRFail'))
addTest(suite, TestAE('test_createAENoOriginator'))
addTest(suite, TestAE('test_createAEEEmptyOriginator'))
addTest(suite, TestAE('test_createAEInvalidRNFail'))
```

test\_deleteAEBByUnknownOriginator,  
test\_deleteAEBByAssignedOriginator

두 테스트 모두 X-M2M-Origin 값과 ri 값을 비교하여 권한 확인

## 테스트 목록

```
addTest(suite, TestAE('test_createAE'))
addTest(suite, TestAE('test_createAEUnderAE'))
addTest(suite, TestAE('test_createAEAgain'))
addTest(suite, TestAE('test_createAEWithExistingOriginator'))
addTest(suite, TestAE('test_retrieveAE'))
addTest(suite, TestAE('test_retrieveAEWithWrongOriginator'))
#addTest(suite, TestAE('test_attributesAE'))
#addTest(suite, TestAE('test_updateAELbl'))
addTest(suite, TestAE('test_updateAETy'))
addTest(suite, TestAE('test_updateAEPi'))
#addTest(suite, TestAE('test_updateAEUnknownAttribute'))
addTest(suite, TestAE('test_deleteAEBByUnknownOriginator'))
addTest(suite, TestAE('test_deleteAEBByAssignedOriginator'))
#addTest(suite, TestAE('test_createAEWrongCSZ'))
#addTest(suite, TestAE('test_createAECSZ'))
#addTest(suite, TestAE('test_deleteAECSZ'))
addTest(suite, TestAE('test_createAENoAPI'))
#addTest(suite, TestAE('test_createAEAPIWrongPrefix'))
addTest(suite, TestAE('test_createAEAPICorrectR'))
addTest(suite, TestAE('test_createAEAPICorrectN'))
#addTest(suite, TestAE('test_createAEAPIRVI3LowerCaseR'))
#addTest(suite, TestAE('test_createAEAPIRVI4LowerCaseRFail'))
addTest(suite, TestAE('test_createAENoOriginator'))
addTest(suite, TestAE('test_createAEEEmptyOriginator'))
addTest(suite, TestAE('test_createAEInvalidRNFail'))
```

test\_createAEWrongCSE, test\_createAECSZ,  
test\_deleteAECSZ

`csz` attribute가 존재하지 않아서 테스트 불가

## 테스트 목록

```
addTest(suite, TestAE('test_createAE'))
addTest(suite, TestAE('test_createAEUnderAE'))
addTest(suite, TestAE('test_createAEAgain'))
addTest(suite, TestAE('test_createAEWithExistingOriginator'))
addTest(suite, TestAE('test_retrieveAE'))
addTest(suite, TestAE('test_retrieveAEWithWrongOriginator'))
#addTest(suite, TestAE('test_attributesAE'))
#addTest(suite, TestAE('test_updateAELbl'))
addTest(suite, TestAE('test_updateAETy'))
addTest(suite, TestAE('test_updateAEPi'))
#addTest(suite, TestAE('test_updateAEUnknownAttribute'))
addTest(suite, TestAE('test_deleteAEBByUnknownOriginator'))
addTest(suite, TestAE('test_deleteAEBByAssignedOriginator'))
#addTest(suite, TestAE('test_createAEWrongCSZ'))
#addTest(suite, TestAE('test_createAECsz'))
#addTest(suite, TestAE('test_deleteAECsz'))
addTest(suite, TestAE('test_createAENoAPI'))
#addTest(suite, TestAE('test_createAEAPIWrongPrefix'))
addTest(suite, TestAE('test_createAEAPICorrectR'))
addTest(suite, TestAE('test_createAEAPICorrectN'))
#addTest(suite, TestAE('test_createAEAPIRVI3LowerCaseR'))
#addTest(suite, TestAE('test_createAEAPIRVI4LowerCaseRFail'))
addTest(suite, TestAE('test_createAENoOriginator'))
addTest(suite, TestAE('test_createAEEEmptyOriginator'))
addTest(suite, TestAE('test_createAEInvalidRNFail'))
```

test\_createAENoAPI

기존 코드로 통과

## 테스트 목록

```
addTest(suite, TestAE('test_createAE'))
addTest(suite, TestAE('test_createAEUnderAE'))
addTest(suite, TestAE('test_createAEAgain'))
addTest(suite, TestAE('test_createAEWithExistingOriginator'))
addTest(suite, TestAE('test_retrieveAE'))
addTest(suite, TestAE('test_retrieveAEWithWrongOriginator'))
#addTest(suite, TestAE('test_attributesAE'))
#addTest(suite, TestAE('test_updateAELbl'))
addTest(suite, TestAE('test_updateAETy'))
addTest(suite, TestAE('test_updateAEPi'))
#addTest(suite, TestAE('test_updateAEUnknownAttribute'))
addTest(suite, TestAE('test_deleteAEBByUnknownOriginator'))
addTest(suite, TestAE('test_deleteAEBByAssignedOriginator'))
#addTest(suite, TestAE('test_createAEWrongCSZ'))
#addTest(suite, TestAE('test_createAECsz'))
#addTest(suite, TestAE('test_deleteAECsz'))
addTest(suite, TestAE('test_createAENoAPI'))
#addTest(suite, TestAE('test_createAEAPIWrongPrefix'))
addTest(suite, TestAE('test_createAEAPICorrectR'))
addTest(suite, TestAE('test_createAEAPICorrectN'))
#addTest(suite, TestAE('test_createAEAPIRVI3LowerCaseR'))
#addTest(suite, TestAE('test_createAEAPIRVI4LowerCaseRFail'))
addTest(suite, TestAE('test_createAENoOriginator'))
addTest(suite, TestAE('test_createAEEEmptyOriginator'))
addTest(suite, TestAE('test_createAEInvalidRNFail'))
```

test\_createAEAPIWrongPrefix,  
test\_createAEAPICorrectR  
test\_createAEAPICorrectN

`api` attribute의 접두사가 유효한지 검사하는 테스트,  
이에 대해 문서를 찾아보고 수정할 예정

## 테스트 목록

```
addTest(suite, TestAE('test_createAE'))
addTest(suite, TestAE('test_createAEUnderAE'))
addTest(suite, TestAE('test_createAEGain'))
addTest(suite, TestAE('test_createAEWithExistingOriginator'))
addTest(suite, TestAE('test_retrieveAE'))
addTest(suite, TestAE('test_retrieveAEWithWrongOriginator'))
#addTest(suite, TestAE('test_attributesAE'))
#addTest(suite, TestAE('test_updateAELbl'))
addTest(suite, TestAE('test_updateAETy'))
addTest(suite, TestAE('test_updateAEPi'))
#addTest(suite, TestAE('test_updateAEUnknownAttribute'))
addTest(suite, TestAE('test_deleteAEBByUnknownOriginator'))
addTest(suite, TestAE('test_deleteAEBByAssignedOriginator'))
#addTest(suite, TestAE('test_createAEWrongCSZ'))
#addTest(suite, TestAE('test_createAECsz'))
#addTest(suite, TestAE('test_deleteAECsz'))
addTest(suite, TestAE('test_createAENoAPI'))
#addTest(suite, TestAE('test_createAEAPIWrongPrefix'))
addTest(suite, TestAE('test_createAEAPICorrectR'))
addTest(suite, TestAE('test_createAEAPICorrectN'))
#addTest(suite, TestAE('test_createAEAPIRVI3LowerCaseR'))
#addTest(suite, TestAE('test_createAEAPIRVI4LowerCaseRFail'))
addTest(suite, TestAE('test_createAENoOriginator'))
addTest(suite, TestAE('test_createAEEEmptyOriginator'))
addTest(suite, TestAE('test_createAEInvalidRNFail'))
```

test\_createAEAPIRVI3LowerCaseR,  
test\_createAEAPIRVI4LowerCaseRFail

RVI에 대해 좀 더 공부 한 후 보완 방향 결정

## 테스트 목록

```
addTest(suite, TestAE('test_createAE'))
addTest(suite, TestAE('test_createAEUnderAE'))
addTest(suite, TestAE('test_createAEGain'))
addTest(suite, TestAE('test_createAEWithExistingOriginator'))
addTest(suite, TestAE('test_retrieveAE'))
addTest(suite, TestAE('test_retrieveAEWithWrongOriginator'))
#addTest(suite, TestAE('test_attributesAE'))
#addTest(suite, TestAE('test_updateAELbl'))
addTest(suite, TestAE('test_updateAETy'))
addTest(suite, TestAE('test_updateAEPi'))
#addTest(suite, TestAE('test_updateAEUnknownAttribute'))
addTest(suite, TestAE('test_deleteAEBByUnknownOriginator'))
addTest(suite, TestAE('test_deleteAEBByAssignedOriginator'))
#addTest(suite, TestAE('test_createAEWrongCSZ'))
#addTest(suite, TestAE('test_createAECsz'))
#addTest(suite, TestAE('test_deleteAECsz'))
addTest(suite, TestAE('test_createAENoAPI'))
#addTest(suite, TestAE('test_createAEAPIWrongPrefix'))
addTest(suite, TestAE('test_createAEAPICorrectR'))
addTest(suite, TestAE('test_createAEAPICorrectN'))
#addTest(suite, TestAE('test_createAEAPIRVI3LowerCaseR'))
#addTest(suite, TestAE('test_createAEAPIRVI4LowerCaseRFail'))
addTest(suite, TestAE('test_createAENoOriginator'))
addTest(suite, TestAE('test_createAEEEmptyOriginator'))
addTest(suite, TestAE('test_createAEInvalidDRNFail'))
```

test\_createAENoOriginator,  
test\_createAEEEmptyOriginator

기존 코드로 통과  
단, 접두사 C가 존재하지 않으면 붙이식 식으로 ri 부여 방식  
변경 (ri와 aei는 동일)



## 테스트 목록

```
addTest(suite, TestAE('test_createAE'))
addTest(suite, TestAE('test_createAEUnderAE'))
addTest(suite, TestAE('test_createAEAgain'))
addTest(suite, TestAE('test_createAEWithExistingOriginator'))
addTest(suite, TestAE('test_retrieveAE'))
addTest(suite, TestAE('test_retrieveAEWithWrongOriginator'))
#addTest(suite, TestAE('test_attributesAE'))
#addTest(suite, TestAE('test_updateAELbl'))
addTest(suite, TestAE('test_updateAETy'))
addTest(suite, TestAE('test_updateAEPi'))
#addTest(suite, TestAE('test_updateAEUnknownAttribute'))
addTest(suite, TestAE('test_deleteAEBByUnknownOriginator'))
addTest(suite, TestAE('test_deleteAEBByAssignedOriginator'))
#addTest(suite, TestAE('test_createAEWrongCSZ'))
#addTest(suite, TestAE('test_createAECSZ'))
#addTest(suite, TestAE('test_deleteAECSZ'))
addTest(suite, TestAE('test_createAENoAPI'))
#addTest(suite, TestAE('test_createAEAPIWrongPrefix'))
addTest(suite, TestAE('test_createAEAPICorrectR'))
addTest(suite, TestAE('test_createAEAPICorrectN'))
#addTest(suite, TestAE('test_createAEAPIRVI3LowerCaseR'))
#addTest(suite, TestAE('test_createAEAPIRVI4LowerCaseRFail'))
addTest(suite, TestAE('test_createAENoOriginator'))
addTest(suite, TestAE('test_createAEEEmptyOriginator'))
addTest(suite, TestAE('test_createAEInvalidRNFail'))
```

test\_createAEInvalidRNFail

rn이 uri 경로에 들어가기에 ' ', '?', '/' 등등의 유효하지 않은 문자에 대한 검사 필요