**Smart home protocol**

|  |  |
| --- | --- |
| 작성자 | 이청엽 |
| 문서 버전 | V 0.0.1 |
| 작성 일장 | 2017.05.26 |

목 차

[**1.** **Smart home 프로토콜** 9](#_Toc483560864)

[1.1 메시지 규격 9](#_Toc483560865)

[1.1.1 Header 9](#_Toc483560866)

[1.1.2 Data 9](#_Toc483560867)

[1.2 서버, 게이트웨이 통신 9](#_Toc483560868)

[1.2.1 게이트웨이 정보 요청 9](#_Toc483560869)

[1.2.1.1 Request 9](#_Toc483560870)

[1.2.1.2 Response 10](#_Toc483560871)

[1.2.1.3 Sample 10](#_Toc483560872)

[1.2.2 디바이스(가전기기, 센서) 정보 요청 11](#_Toc483560873)

[1.2.2.1 Request 11](#_Toc483560874)

[1.2.2.2 Response 11](#_Toc483560875)

[1.2.2.3 Sample 12](#_Toc483560876)

[1.2.3 센서 상태 변경 알림 13](#_Toc483560877)

[1.2.3.1 Notification 13](#_Toc483560878)

[1.2.3.2 Sample 14](#_Toc483560879)

[1.2.4 가전기기 상태 변경 알림 14](#_Toc483560880)

[1.2.4.1 Notification 14](#_Toc483560881)

[1.2.4.2 Sample 15](#_Toc483560882)

[1.3 서버, KIOSK 통신 15](#_Toc483560883)

[1.3.1 유저 등록 15](#_Toc483560884)

[1.3.1.1 Request 15](#_Toc483560885)

[1.3.1.2 Response 16](#_Toc483560886)

[1.3.1.3 Sample 16](#_Toc483560887)

[1.3.2 유저 수정 17](#_Toc483560888)

[1.3.2.1 Request 17](#_Toc483560889)

[1.3.2.2 Response 18](#_Toc483560890)

[1.3.2.3 Sample 18](#_Toc483560891)

[1.3.3 유저 삭제 19](#_Toc483560892)

[1.3.3.1 Request 19](#_Toc483560893)

[1.3.3.2 Response 20](#_Toc483560894)

[1.3.3.3 Sample 20](#_Toc483560895)

[1.3.4 게스트 등록 21](#_Toc483560896)

[1.3.4.1 Request 21](#_Toc483560897)

[1.3.4.2 Response 22](#_Toc483560898)

[1.3.4.3 Sample 22](#_Toc483560899)

[1.3.5 관리자 접속 23](#_Toc483560900)

[1.3.5.1 Request 23](#_Toc483560901)

[1.3.5.2 Response 24](#_Toc483560902)

[1.3.5.3 Sample 24](#_Toc483560903)

[1.3.6 유저 정보 요청 25](#_Toc483560904)

[1.3.6.1 Request 25](#_Toc483560905)

[1.3.6.2 Response 25](#_Toc483560906)

[1.3.6.3 Sample 26](#_Toc483560907)

[1.3.7 게스트 정보 요청 27](#_Toc483560908)

[1.3.7.1 Request 27](#_Toc483560909)

[1.3.7.2 Response 27](#_Toc483560910)

[1.3.7.3 Sample 28](#_Toc483560911)

[1.3.8 환경정보 알림 28](#_Toc483560912)

[1.3.8.1 Notification 28](#_Toc483560913)

[1.3.8.2 Sample 29](#_Toc483560914)

[1.3.9 유저 위치 알림 29](#_Toc483560915)

[1.3.9.1 Notification 30](#_Toc483560916)

[1.3.9.2 Sample 30](#_Toc483560917)

[1.4 게이트웨이, Mash-up DB 통신 30](#_Toc483560918)

[1.4.1 서비스 목록 요청 31](#_Toc483560919)

[1.4.1.1 Request 31](#_Toc483560920)

[1.4.1.2 Response 31](#_Toc483560921)

[1.4.1.3 Sample 31](#_Toc483560922)

[1.4.2 가전기기 등록 32](#_Toc483560923)

[1.4.2.1 Request 32](#_Toc483560924)

[1.4.2.2 Response 33](#_Toc483560925)

[1.4.2.3 Sample 33](#_Toc483560926)

[1.4.3 서비스 알림 34](#_Toc483560927)

[1.4.3.1 Notification 34](#_Toc483560928)

[1.4.3.2 Sample 35](#_Toc483560929)

[1.5 게이트웨이, Mirror TV 통신 36](#_Toc483560930)

[1.5.1 스케줄 정보 요청 36](#_Toc483560931)

[1.5.1.1 Request 36](#_Toc483560932)

[1.5.1.2 Response 36](#_Toc483560933)

[1.5.1.3 Sample 37](#_Toc483560934)

[1.5.2 스케줄 등록 37](#_Toc483560935)

[1.5.2.1 Request 37](#_Toc483560936)

[1.5.2.2 Response 38](#_Toc483560937)

[1.5.2.3 Sample 38](#_Toc483560938)

[1.1.1 스케줄 삭제 39](#_Toc483560939)

[1.1.1.1 Request 39](#_Toc483560940)

[1.1.1.2 Response 40](#_Toc483560941)

[1.1.1.3 Sample 40](#_Toc483560942)

[1.6 게이트웨이, 스마트폰 통신 41](#_Toc483560943)

[1.6.1 스마트폰 정보 알림 41](#_Toc483560944)

[1.6.1.1 Notification 41](#_Toc483560945)

[1.6.1.2 Sample 42](#_Toc483560946)

[1.6.2 스마트 밴드 알림 42](#_Toc483560947)

[1.6.2.1 Notification 42](#_Toc483560948)

[1.6.2.2 Sample 43](#_Toc483560949)

[1.6.3 QR 코드 전송 43](#_Toc483560950)

[1.6.3.1 Request 43](#_Toc483560951)

[1.6.3.2 Response 44](#_Toc483560952)

[1.6.3.3 Sample 44](#_Toc483560953)

[**2.** **Reference** 45](#_Toc483560954)

[2.1 프로토콜 상세정보 45](#_Toc483560955)

[2.1.1 Header 정보 45](#_Toc483560956)

[2.1.1.1 Device Name 45](#_Toc483560957)

[2.1.1.2 Message Type (mt) 45](#_Toc483560958)

[2.1.1.3 Commend (cmd) 45](#_Toc483560959)

[2.1.1.4 Content (ct) 46](#_Toc483560960)

[2.1.1.5 Content Type (ctt) 46](#_Toc483560961)

[2.1.2 Data 정보 46](#_Toc483560962)

[2.1.2.1 Building Management Server 46](#_Toc483560963)

[2.1.2.2 Gateway 47](#_Toc483560964)

[2.1.2.3 Home appliance 47](#_Toc483560965)

[2.1.2.4 Sensor 47](#_Toc483560966)

[2.1.2.5 Service 48](#_Toc483560967)

[2.1.2.6 User 48](#_Toc483560968)

[2.1.2.7 Guest 48](#_Toc483560969)

[2.1.2.8 Manager 49](#_Toc483560970)

[2.1.2.9 Schedule 49](#_Toc483560971)

[2.1.2.10 Smartphone 49](#_Toc483560972)

[2.1.2.11 Smart band 49](#_Toc483560973)

[2.1.2.12 QR 50](#_Toc483560974)

추가 및 수정사항

|  |  |  |
| --- | --- | --- |
| 작성자 | 추가 및 수정 내용 | 추가 및 수정 날짜 |
| 이청엽 | 아래 내용 추가   1. Smart home 프로토콜    1. 메시지 규격       1. Header       2. Data    2. 서버, 게이트웨이 통신       1. 게이트웨이 정보요청          1. Request          2. Response          3. Sample       2. 디바이스(가전기기, 센서) 정보요청          1. Request          2. Response          3. Sample       3. 센서 상태 변경 알림          1. Notification          2. Sample       4. 가전기기 상태 변경 알림          1. Notification          2. Sample    3. 서버, KIOSK 통신       1. 유저 등록          1. Request          2. Response          3. Sample       2. 유저 수정          1. Request          2. Response          3. Sample       3. 유저 삭제          1. Request          2. Response          3. Sample       4. 게스트 등록          1. Request          2. Response          3. Sample       5. 관리자 접속          1. Request          2. Response          3. Sample       6. 유저 정보 요청          1. Request          2. Response          3. Sample       7. 게스트 정보 요청          1. Request          2. Response          3. Sample       8. 환경정보 알림          1. Notification          2. Sample       9. 유저 위치 알림          1. Notification          2. Sample    4. 게이트웨이, Mash-up DB 통신       1. 서비스 목록 요청          1. Request          2. Response          3. Sample       2. 가전기기 등록          1. Request          2. Response          3. Sample       3. 서비스 알림          1. Request          2. Response          3. Sample    5. 게이트웨이, Mirror TV 통신       1. 스케줄 정보 요청          1. Request          2. Response          3. Sample       2. 스케줄 등록          1. Request          2. Response          3. Sample       3. 스케줄 삭제          1. Request          2. Response          3. Sample    6. 게이트웨이, 스마트폰 통신       1. 스마트폰 정보 알림          1. Notification          2. Sample       2. 스마트 밴드 알림          1. Notification          2. Sample       3. QR 코드 전송          1. Request          2. Response          3. Sample 2. Reference    1. 프로토콜 상세정보       1. Header 정보          1. Device Name          2. Message Type          3. Commend          4. Content          5. Content Type       2. Data 정보          1. Building Management Server          2. Gateway          3. Home appliance          4. Sensor          5. Service          6. User          7. Guest          8. Manager          9. Schedule          10. Smartphone          11. Smart band          12. QR | 2017-05-26 |

용어 및 약어 정리

|  |  |
| --- | --- |
| 용어 및 약어 | 설명 |
| JSON | (JavaScript Object Notation) 경량의 DATA-교환 형식 |
| Gateway | 가전기기, 센서, 사용자 정보 등을 수집하여 사용자에게 알맞은 서비스를 제공 |
| BMS | Building Management Server 약자로, 게이트웨이 데이터를 수집, 관리 |

2. **Smart home 프로토콜**

* 메시지 포맷은 경량의 데이터 교환 형식인 JSON 기반으로 한다.
* 메시지는 Header, Data로 나뉜다.
  1. 메시지 규격
     1. Header

|  |  |
| --- | --- |
| Header | |
| Name | Description |
| to | 보낼 디바이스 장치 명칭. §2.1.1 참조 |
| from | 보낸 디바이스 장치 명칭. §2.1.1 참조 |
| id | 장치 고유 아이디 |
| mt | Message Type (요청, 응답, 알림 3가지로 구분). §2.1.2 참조 |
| cmd | Commend 메시지 명령(CRUD). §2.1.3 참조 |
| ct | content 개수. §2.1.5 참조 |
| ctt | Payload type(Data와 Result형태를 결정). §2.1.4 참조 |

* + 1. Data

요청, 응답 메시지 payload. §2.1.2 참조

* 1. 서버, 게이트웨이 통신
     1. 게이트웨이 정보 요청
        1. Request

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Name** | **Value** | **description** |
| **Header** | to | Gateway | §2.1.1.1 참조 |
| from | BMS | §2.1.1.1 참조 |
| id | “kw-bms-1” | 고유 아이디 |
| mt | Request | §2.1.1.2 참조 |
| cmd | Retrieve | §2.1.1.3 참조 |
| ct | Gateway | §2.1.1.4 참조 |
| ctt | None | §2.1.1.5 참조 |
| **Data** |  |  |  |
|  |  |  |

* + - 1. Response

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Name** | **Value** | **description** |
| **Header** | to | BMS | §2.1.1.1 참조 |
| from | Gateway | §2.1.1.1 참조 |
| id | “kw-gw-1” | 고유 아이디 |
| mt | Response | §2.1.1.2 참조 |
| cmd | Retrieve | §2.1.1.3 참조 |
| ct | Gateway | §2.1.1.4 참조 |
| ctt | None | §2.1.1.5 참조 |
| **Data** | gwid | “kw-gw-1” | §2.1.2.2 참조 |
| bd | “kw-building” | §2.1.2.2 참조 |
| flr | “6” | §2.1.2.2 참조 |
| lct | “office” | §2.1.2.2 참조 |
| rt | “2017-05-25 13:00:13” | §2.1.2.2 참조 |

* + - 1. Sample

|  |
| --- |
| {  "to” : “gateway”,  “from” : “bms”,  "id" : “kw-bms-1”,  “mt” : 0,  “cmd” : 1,  "ct" : 14,  “ctt” : 0  } |
| {  "to” : “bms”,  “from” : “gateway”,  "id" : “kw-bms-1”,  “mt” : 1,  “cmd” : 1,  "ct" : 14,  “ctt” : 0,  "data": {  "gwid" : "kw-gw-1",  “bd” : “kw-building”,  “flr” : “6”,  “lct” : “office”,  “rt” : “2017-05-25 13:00:13”  }  } |

* + 1. 디바이스(가전기기, 센서) 정보 요청
       1. Request

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Name** | **Value** | **description** |
| **Header** | to | Gateway | §2.1.1.1 참조 |
| from | BMS | §2.1.1.1 참조 |
| id | “kw-bms-1” | 고유 아이디 |
| mt | Request | §2.1.1.2 참조 |
| cmd | Retrieve | §2.1.1.3 참조 |
| ct | Device | §2.1.1.4 참조 |
| ctt | None | §2.1.1.5 참조 |
| **Data** |  |  |  |
|  |  |  |

* + - 1. Response

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Name** | **Value** | **description** |
| **Header** | to | BMS | §2.1.1.1 참조 |
| from | Gateway | §2.1.1.1 참조 |
| id | “kw-gw-1” | 고유 아이디 |
| mt | Response | §2.1.1.2 참조 |
| cmd | Retrieve | §2.1.1.3 참조 |
| ct | Device | §2.1.1.4 참조 |
| ctt | JSON List | §2.1.1.5 참조 |
| **Data** | halist | [  {  "haid" : "utas-tv-1”,  "hanm" : “TV”,  "hat" : 1,  "hafc" : “onoff=1,channel=1”,  "hamf" : “utas”,  "rt" : “2017-05-25 13:00:13”  }  ] | §2.1.2.2 참조 |
| sslist | [  {  "ssid" : “maxfor-env-2”,  "ssnm" : “environment”,  "sst" : 2,  "ssst" : “temp=27,hum=28”,  "ssmf" : “maxfor”,  "rt" : “2017-05-25 13:00:13”  }  ] | §2.1.2.2 참조 |

* + - 1. Sample

|  |
| --- |
| {  "to” : “gateway”,  “from” : “bms”,  "id" : “kw-bms-1”,  “mt” : 0,  “cmd” : 1,  "ct" : 1,  “ctt” : 2  } |
| {  "to” : “bms”,  “from” : “gateway”,  "id" : “kw-bms-1”,  “mt” : 1,  “cmd” : 1,  "ct" : 1,  “ctt” : 2,  "data": {  "halist" : [  {  "haid" : "utas-tv-1”,  "hanm" : “TV”,  "hat" : 1,  "hafc" : “onoff=1,channel=1”,  "hamf" : “utas”,  "rt" : “2017-05-25 13:00:13”  }],  “sslist” : [  {  "ssid" : “maxfor-env-2”,  "ssnm" : “environment”,  "sst" : 2,  "ssst" : “temp=27,hum=28”,  "ssmf" : “maxfor”,  "rt" : “2017-05-25 13:00:13”  }  ],  }  } |

* + 1. 센서 상태 변경 알림
       1. Notification

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Name** | **Value** | **description** |
| **Header** | to | BMS | §2.1.1.1 참조 |
| from | Gateway | §2.1.1.1 참조 |
| id | “kw-gw-1” | 고유 아이디 |
| mt | Notification | §2.1.1.2 참조 |
| cmd | Update | §2.1.1.3 참조 |
| ct | Sensor | §2.1.1.4 참조 |
| ctt | JSON | §2.1.1.5 참조 |
| **Data** | ssid | “maxfor-env-2” | §2.1.2.4 참조 |
| ssnm | “environment” | §2.1.2.4 참조 |
| sst | 2 | §2.1.2.4 참조 |
| ssst | “temp=27,hum=28” | §2.1.2.4 참조 |
| ssmf | “maxfor” | §2.1.2.4 참조 |
| rt | “2017-05-25 13:00:13” | §2.1.2.4 참조 |

* + - 1. Sample

|  |
| --- |
| {  "to” : “gateway”,  “from” : “bms”,  "id" : “kw-bms-1”,  “mt” : 2,  “cmd” : 2,  "ct" : 3,  “ctt” : 1,  “data” : {  "ssid" : “maxfor-env-2”,  "ssnm" : “environment”,  "sst" : 2,  "ssst" : “temp=27,hum=28”,  "ssmf" : “maxfor”,  "rt" : “2017-05-25 13:00:13”  }  } |

* + 1. 가전기기 상태 변경 알림
       1. Notification

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Name** | **Value** | **description** |
| **Header** | to | BMS | §2.1.1.1 참조 |
| from | Gateway | §2.1.1.1 참조 |
| id | “kw-gw-1” | 고유 아이디 |
| mt | Notification | §2.1.1.2 참조 |
| cmd | Update | §2.1.1.3 참조 |
| ct | Home appliance | §2.1.1.4 참조 |
| ctt | JSON | §2.1.1.5 참조 |
| **Data** | haid | “utas-tv-1” | §2.1.2.3 참조 |
| hanm | “TV” | §2.1.2.3 참조 |
| hat | 1 | §2.1.2.3 참조 |
| hafc | “onoff=1,channel=1” | §2.1.2.3 참조 |
| hamf | “utas” | §2.1.2.3 참조 |
| rt | “2017-05-25 13:00:13” | §2.1.2.3 참조 |

* + - 1. Sample

|  |
| --- |
| {  "to” : “bms”,  “from” : “gateway”,  "id" : “kw-bms-1”,  “mt” : 2,  “cmd” : 2,  "ct" : 2,  “ctt” : 1,  “data” : {  "haid" : “utas-tv-1”,  "hanm" : “TV”,  "hat" : 1,  "hafc" : “onoff=1,channel=1”,  "hamf" : “utas”,  "rt" : “2017-05-25 13:00:13”  }  } |

* 1. 서버, KIOSK 통신
     1. 유저 등록
        1. Request

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Name** | **Value** | **description** |
| **Header** | to | BMS | §2.1.1.1 참조 |
| from | Kiosk | §2.1.1.1 참조 |
| id | “kw-kiosk-1” | 고유 아이디 |
| mt | Request | §2.1.1.2 참조 |
| cmd | Create | §2.1.1.3 참조 |
| ct | User | §2.1.1.4 참조 |
| ctt | JSON | §2.1.1.5 참조 |
| **Data** | phnb | "01012341234" | §2.1.2.6 참조 |
| name | "홍길동" | §2.1.2.6 참조 |
| afl | "광운대학교" | §2.1.2.6 참조 |
| ofc | "603호" | §2.1.2.6 참조 |
| type | "교수" | §2.1.2.6 참조 |
| tagid | 13 | §2.1.2.6 참조 |

* + - 1. Response

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Name** | **Value** | **description** |
| **Header** | to | BMS | §2.1.1.1 참조 |
| from | Kiosk | §2.1.1.1 참조 |
| id | “kw-bms-1” | 고유 아이디 |
| mt | Response | §2.1.1.2 참조 |
| cmd | Create | §2.1.1.3 참조 |
| ct | User | §2.1.1.4 참조 |
| ctt | JSON | §2.1.1.5 참조 |
| **Data** | phnb | "01012341234" | §2.1.2.6 참조 |
| name | "홍길동" | §2.1.2.6 참조 |
| afl | "광운대학교" | §2.1.2.6 참조 |
| ofc | "603호" | §2.1.2.6 참조 |
| type | "교수" | §2.1.2.6 참조 |
| tagid | 13 | §2.1.2.6 참조 |
| rt | "2017-05-25 13:00:13" | §2.1.2.6 참조 |

* + - 1. Sample

|  |
| --- |
| {  "to” : “bms”,  “from” : “kiosk”,  "id" : “kw-kiosk-1”,  “mt” : 0,  “cmd” : 0,  "ct" : 10,  “ctt” : 1,  “data” : {  "phnb" : "01012341234",  "name" : "홍길동",  "afl" : "광운대학교",  "ofc" : "603호",  "type" : "교수",  “tagid” : 13  }  } |
| {  "to” : “kiosk  “from” : “bms  "id" : “kw-bms-1”,  “mt” : 1,  “cmd” : 0,  "ct" : 10,  “ctt” : 1,  “data” : {  "phnb" : "01012341234",  "name" : "홍길동",  "afl" : "광운대학교",  "ofc" : "603호",  "type" : "교수",  “tagid” : 13  "rt" : "2017-05-25 13:00:13"  }  } |

* + 1. 유저 수정
       1. Request

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Name** | **Value** | **description** |
| **Header** | to | BMS | §2.1.1.1 참조 |
| from | Kiosk | §2.1.1.1 참조 |
| id | “kw-kiosk-1” | 고유 아이디 |
| mt | Request | §2.1.1.2 참조 |
| cmd | Update | §2.1.1.3 참조 |
| ct | User | §2.1.1.4 참조 |
| ctt | JSON | §2.1.1.5 참조 |
| **Data** | phnb | "01012341234" | §2.1.2.6 참조 |
| name | "홍길동" | §2.1.2.6 참조 |
| afl | "광운대학교" | §2.1.2.6 참조 |
| ofc | "603호" | §2.1.2.6 참조 |
| type | "교수" | §2.1.2.6 참조 |
| tagid | 13 | §2.1.2.6 참조 |

* + - 1. Response

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Name** | **Value** | **description** |
| **Header** | to | BMS | §2.1.1.1 참조 |
| from | Kiosk | §2.1.1.1 참조 |
| id | “kw-bms-1” | 고유 아이디 |
| mt | Response | §2.1.1.2 참조 |
| cmd | Update | §2.1.1.3 참조 |
| ct | User | §2.1.1.4 참조 |
| ctt | JSON | §2.1.1.5 참조 |
| **Data** | phnb | "01012341234" | §2.1.2.6 참조 |
| name | "홍길동" | §2.1.2.6 참조 |
| afl | "광운대학교" | §2.1.2.6 참조 |
| ofc | "603호" | §2.1.2.6 참조 |
| type | "교수" | §2.1.2.6 참조 |
| tagid | 13 | §2.1.2.6 참조 |
| rt | "2017-05-25 13:00:13" | §2.1.2.6 참조 |

* + - 1. Sample

|  |
| --- |
| {  "to” : “bms”,  “from” : “kiosk”,  "id" : “kw-kiosk-1”,  “mt” : 0,  “cmd” : 2,  "ct" : 10,  “ctt” : 1,  “data” : {  "phnb" : "01012341234",  "name" : "홍길동",  "afl" : "광운대학교",  "ofc" : "603-1호",  "type" : "교수",  “tagid” : 13  }  } |
| {  "to” : “kiosk  “from” : “bms  "id" : “kw-bms-1”,  “mt” : 1,  “cmd” : 2,  "ct" : 10,  “ctt” : 1,  “data” : {  "phnb" : "01012341234",  "name" : "홍길동",  "afl" : "광운대학교",  "ofc" : "603-1호 ",  "type" : "교수",  “tagid” : 13,  "rt" : "2017-05-25 13:00:13"  }  } |

* + 1. 유저 삭제
       1. Request

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Name** | **Value** | **description** |
| **Header** | to | BMS | §2.1.1.1 참조 |
| from | Kiosk | §2.1.1.1 참조 |
| id | “kw-kiosk-1” | 고유 아이디 |
| mt | Request | §2.1.1.2 참조 |
| cmd | Delete | §2.1.1.3 참조 |
| ct | User | §2.1.1.4 참조 |
| ctt | JSON | §2.1.1.5 참조 |
| **Data** | phnb | "01012341234" | §2.1.2.6 참조 |
| name | "홍길동" | §2.1.2.6 참조 |
| afl | "광운대학교" | §2.1.2.6 참조 |
| ofc | "603호" | §2.1.2.6 참조 |
| type | "교수" | §2.1.2.6 참조 |
| tagid | 13 | §2.1.2.6 참조 |

* + - 1. Response

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Name** | **Value** | **description** |
| **Header** | to | BMS | §2.1.1.1 참조 |
| from | Kiosk | §2.1.1.1 참조 |
| id | “kw-bms-1” | 고유 아이디 |
| mt | Response | §2.1.1.2 참조 |
| cmd | Delete | §2.1.1.3 참조 |
| ct | User | §2.1.1.4 참조 |
| ctt | JSON | §2.1.1.5 참조 |
| **Data** | phnb | "01012341234" | §2.1.2.6 참조 |
| name | "홍길동" | §2.1.2.6 참조 |
| afl | "광운대학교" | §2.1.2.6 참조 |
| ofc | "603호" | §2.1.2.6 참조 |
| type | "교수" | §2.1.2.6 참조 |
| tagid | 13 | §2.1.2.6 참조 |
| rt | "2017-05-25 13:00:13" | §2.1.2.6 참조 |

* + - 1. Sample

|  |
| --- |
| {  "to” : “bms”,  “from” : “kiosk”,  "id" : “kw-kiosk-1”,  “mt” : 0,  “cmd” : 3,  "ct" : 10,  “ctt” : 1,  “data” : {  "phnb" : "01012341234",  "name" : "홍길동",  "afl" : "광운대학교",  "ofc" : "603-1호",  "type" : "교수",  “tagid” : 13  }  } |
| {  "to” : “kiosk  “from” : “bms  "id" : “kw-bms-1”,  “mt” : 1,  “cmd” : 3,  "ct" : 10,  “ctt” : 1,  “data” : {  "phnb" : "01012341234",  "name" : "홍길동",  "afl" : "광운대학교",  "ofc" : "603-1호 ",  "type" : "교수",  “tagid” : 13,  "rt" : "2017-05-25 13:00:13"  }  } |

* + 1. 게스트 등록
       1. Request

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Name** | **Value** | **description** |
| **Header** | to | BMS | §2.1.1.1 참조 |
| from | Kiosk | §2.1.1.1 참조 |
| id | “kw-kiosk-1” | 고유 아이디 |
| mt | Request | §2.1.1.2 참조 |
| cmd | Create | §2.1.1.3 참조 |
| ct | Guest | §2.1.1.4 참조 |
| ctt | JSON | §2.1.1.5 참조 |
| **Data** | phnb | "01056785678" | §2.1.2.7 참조 |
| name | “이순신” | §2.1.2.7 참조 |
| afl | “KETI” | §2.1.2.7 참조 |
| adv | "홍길동" | §2.1.2.7 참조 |
| vspp | "회의" | §2.1.2.7 참조 |

* + - 1. Response

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Name** | **Value** | **description** |
| **Header** | to | BMS | §2.1.1.1 참조 |
| from | Kiosk | §2.1.1.1 참조 |
| id | “kw-bms-1” | 고유 아이디 |
| mt | Response | §2.1.1.2 참조 |
| cmd | Create | §2.1.1.3 참조 |
| ct | Guest | §2.1.1.4 참조 |
| ctt | JSON | §2.1.1.5 참조 |
| **Data** | phnb | "01056785678" | §2.1.2.7 참조 |
| name | “이순신” | §2.1.2.7 참조 |
| afl | “KETI” | §2.1.2.7 참조 |
| adv | "홍길동" | §2.1.2.7 참조 |
| vspp | "회의" | §2.1.2.7 참조 |
| rt | "2017-05-25 13:00:13" | §2.1.2.7 참조 |

* + - 1. Sample

|  |
| --- |
| {  "to” : “bms”,  “from” : “kiosk”,  "id" : “kw-kiosk-1”,  “mt” : 0,  “cmd” : 0,  "ct" : 11,  “ctt” : 1,  “data” : {  "phnb" : "01056785678",  "name" : “이순신”,  "afl" : “KETI”,  "adv" : "홍길동",  "vspp" : "회의"  }  } |
| {  "to” : “kiosk  “from” : “bms  "id" : “kw-bms-1”,  “mt” : 1,  “cmd” : 0,  "ct" : 11,  “ctt” : 1,  “data” : {  "phnb" : "01056785678",  "name" : “이순신”,  "afl" : “KETI”,  "adv" : "홍길동",  "vspp" : "회의",  "rt" : "2017-05-25 13:00:13"  }  } |

* + 1. 관리자 접속
       1. Request

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Name** | **Value** | **description** |
| **Header** | to | BMS | §2.1.1.1 참조 |
| from | Kiosk | §2.1.1.1 참조 |
| id | “kw-kiosk-1” | 고유 아이디 |
| mt | Request | §2.1.1.2 참조 |
| cmd | Retrieve | §2.1.1.3 참조 |
| ct | Manager | §2.1.1.4 참조 |
| ctt | JSON | §2.1.1.5 참조 |
| **Data** | mngid | "keti123" | §2.1.2.8 참조 |
| pswd | "12345678" | §2.1.2.8 참조 |

* + - 1. Response

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Name** | **Value** | **description** |
| **Header** | to | BMS | §2.1.1.1 참조 |
| from | Kiosk | §2.1.1.1 참조 |
| id | “kw-bms-1” | 고유 아이디 |
| mt | Response | §2.1.1.2 참조 |
| cmd | Retrieve | §2.1.1.3 참조 |
| ct | Manager | §2.1.1.4 참조 |
| ctt | JSON | §2.1.1.5 참조 |
| **Data** | mngid | "keti123" | §2.1.2.8 참조 |
| name | "이광운" | §2.1.2.8 참조 |
| phnb | "01078907890" | §2.1.2.8 참조 |
| afl | "광운대학교" | §2.1.2.8 참조 |
| rt | "2017-05-25 13:00:13" | §2.1.2.8 참조 |

* + - 1. Sample

|  |
| --- |
| {  "to” : “bms”,  “from” : “kiosk”,  "id" : “kw-kiosk-1”,  “mt” : 0,  “cmd” : 1,  "ct" : 12,  “ctt” : 1,  “data” : {  "mngid" : "keti123",  "pswd" : "12345678"  }  } |
| {  "to” : “kiosk  “from” : “bms  "id" : “kw-bms-1”,  “mt” : 1,  “cmd” : 1,  "ct" : 12,  “ctt” : 1,  “data” : {  "mngid" : "keti123",  "name" : "이광운",  "phnb" : "01078907890",  "afl" : "광운대학교",  "rt" : "2017-05-25 13:00:13"  }  } |

* + 1. 유저 정보 요청
       1. Request

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Name** | **Value** | **description** |
| **Header** | to | BMS | §2.1.1.1 참조 |
| from | Kiosk | §2.1.1.1 참조 |
| id | “kw-kiosk-1” | 고유 아이디 |
| mt | Request | §2.1.1.2 참조 |
| cmd | Retrieve | §2.1.1.3 참조 |
| ct | User | §2.1.1.4 참조 |
| ctt | None | §2.1.1.5 참조 |
| **Data** |  |  |  |

* + - 1. Response

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Name** | **Value** | **description** |
| **Header** | to | BMS | §2.1.1.1 참조 |
| from | Kiosk | §2.1.1.1 참조 |
| id | “kw-bms-1” | 고유 아이디 |
| mt | Response | §2.1.1.2 참조 |
| cmd | Retrieve | §2.1.1.3 참조 |
| ct | User | §2.1.1.4 참조 |
| ctt | JSON List | §2.1.1.5 참조 |
| **Data** |  | [  {  "phnb" : "01012341234",  "name" : "홍길동",  "afl" : "광운대학교",  "ofc" : "603호",  "type" : "교수",  "crst" : "입실",  "crlt" : "603호",  “tagid” : 13,  “rt" : "2017-05-25 13:00:13"  }  ] | §2.1.2.6 참조 |

* + - 1. Sample

|  |
| --- |
| {  "to” : “bms”,  “from” : “kiosk”,  "id" : “kw-kiosk-1”,  “mt” : 0,  “cmd” : 1,  "ct" : 10,  “ctt” : 0  } |
| {  "to” : “kiosk  “from” : “bms  "id" : “kw-bms-1”,  “mt” : 1,  “cmd” : 1,  "ct" : 10,  “ctt” : 2,  “data” : [  {  "phnb" : "01012341234",  "name" : "홍길동",  "afl" : "광운대학교",  "ofc" : "603호",  "type" : "교수",  "crst" : "입실",  "crlt" : "603호",  “tagid” : 13,  "rt" : "2017-05-25 13:00:13"  }]  } |

* + 1. 게스트 정보 요청
       1. Request

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Name** | **Value** | **description** |
| **Header** | to | BMS | §2.1.1.1 참조 |
| from | Kiosk | §2.1.1.1 참조 |
| id | “kw-kiosk-1” | 고유 아이디 |
| mt | Request | §2.1.1.2 참조 |
| cmd | Retrieve | §2.1.1.3 참조 |
| ct | Guest | §2.1.1.4 참조 |
| ctt | None | §2.1.1.5 참조 |
| **Data** |  |  |  |

* + - 1. Response

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Name** | **Value** | **description** |
| **Header** | to | BMS | §2.1.1.1 참조 |
| from | Kiosk | §2.1.1.1 참조 |
| id | “kw-bms-1” | 고유 아이디 |
| mt | Response | §2.1.1.2 참조 |
| cmd | Retrieve | §2.1.1.3 참조 |
| ct | Guest | §2.1.1.4 참조 |
| ctt | JSON List | §2.1.1.5 참조 |
| **Data** |  | [  {  "phnb" : "01056785678",  "name" : “이순신”,  "afl" : “KETI”,  "adv" : "홍길동",  "vspp" : "회의",  "rt" : "2017-05-25 13:00:13"  }  ] | §2.1.2.6 참조 |

* + - 1. Sample

|  |
| --- |
| {  "to” : “bms”,  “from” : “kiosk”,  "id" : “kw-kiosk-1”,  “mt” : 0,  “cmd” : 1,  "ct" : 11,  “ctt” : 0  } |
| {  "to” : “kiosk  “from” : “bms  "id" : “kw-bms-1”,  “mt” : 1,  “cmd” : 1,  "ct" : 11,  “ctt” : 2,  “data” : [  {  "phnb" : "01056785678",  "name" : “이순신”,  "afl" : “KETI”,  "adv" : "홍길동",  "vspp" : "회의",  "rt" : "2017-05-25 13:00:13"  }]  } |

* + 1. 환경정보 알림
       1. Notification

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Name** | **Value** | **description** |
| **Header** | to | Kiosk | §2.1.1.1 참조 |
| from | BMS | §2.1.1.1 참조 |
| id | “kw-bms-1” | 고유 아이디 |
| mt | Notification | §2.1.1.2 참조 |
| cmd | Update | §2.1.1.3 참조 |
| ct | Sensor | §2.1.1.4 참조 |
| ctt | JSON | §2.1.1.5 참조 |
| **Data** | ssid | “maxfor-env-2” | §2.1.1.4 참조 |
| ssnm | “environment” | §2.1.1.4 참조 |
| sst | 2 | §2.1.1.4 참조 |
| ssst | “temp=27,hum=28” | §2.1.1.4 참조 |
| ssmf | “maxfor” | §2.1.1.4 참조 |
|  |  |  |

* + - 1. Sample

|  |
| --- |
| {  "to” : “kiosk”,  “from” : “bms”,  "id" : “kw-bms-1”,  “mt” : 2,  “cmd” : 2,  "ct" : 3,  “ctt” : 1,  “data” : {  "ssid" : “maxfor-env-2”,  "ssnm" : “environment”,  "sst" : 2,  "ssst" : “temp=27,hum=28”,  "ssmf" : “maxfor”,  "rt" : “2017-05-25 13:00:13”  }  } |

* + 1. 유저 위치 알림
       1. Notification

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Name** | **Value** | **description** |
| **Header** | to | Kiosk | §2.1.1.1 참조 |
| from | BMS | §2.1.1.1 참조 |
| id | “kw-bms-1” | 고유 아이디 |
| mt | Notification | §2.1.1.2 참조 |
| cmd | Update | §2.1.1.3 참조 |
| ct | User | §2.1.1.4 참조 |
| ctt | JSON | §2.1.1.5 참조 |
| **Data** | phnb | "01012341234" | §2.1.2.6 참조 |
| name | "홍길동" | §2.1.2.6 참조 |
| tagid | 13 | §2.1.2.6 참조 |

* + - 1. Sample

|  |
| --- |
| {  "to” : “kiosk”,  “from” : “bms”,  "id" : “kw-bms-1”,  “mt” : 2,  “cmd” : 2,  "ct" : 10,  “ctt” : 1,  “data” : {  "phnb" : "01012341234",  "name" : "홍길동",  "tagid" : 13  }  } |

* 1. 게이트웨이, Mash-up DB 통신
     1. 서비스 목록 요청
        1. Request

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Name** | **Value** | **description** |
| **Header** | to | Mashup | §2.1.1.1 참조 |
| from | Gateway | §2.1.1.1 참조 |
| id | “kw-gw-1” | 고유 아이디 |
| mt | Request | §2.1.1.2 참조 |
| cmd | Retrieve | §2.1.1.3 참조 |
| ct | Service | §2.1.1.4 참조 |
| ctt | None | §2.1.1.5 참조 |
| **Data** |  |  |  |

* + - 1. Response

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Name** | **Value** | **description** |
| **Header** | to | Gateway | §2.1.1.1 참조 |
| from | Mashup | §2.1.1.1 참조 |
| id | “keti-mashup-1” | 고유 아이디 |
| mt | Response | §2.1.1.2 참조 |
| cmd | Retrieve | §2.1.1.3 참조 |
| ct | Service | §2.1.1.4 참조 |
| ctt | JSON List | §2.1.1.5 참조 |
| **Data** |  | [  {  "svid" : "mash-sv-1"  "svnm" : "environment",  "svvs" : "v0.0.2",  "svif" : “this is env service”,  "ctg" :“environment”,  "rqdv" : "air-cleaner,robot-vacuum",  "isus" : true,  "rt" : "2017-05-25 13:00:13"  }  ] | §2.1.2.5 참조 |

* + - 1. Sample

|  |
| --- |
| {  "to” : “mashup”,  “from” : “gateway”,  "id" : “kw-gw-1”,  “mt” : 0,  “cmd” : 1,  "ct" : 4,  “ctt” : 0  } |
| {  "to” : “gateway”  “from” : “mashup”  "id" : “keti-mashup-1”,  “mt” : 1,  “cmd” : 1,  "ct" : 4,  “ctt” : 2,  “data” : [  {  "svid" : "mash-sv-1"  "svnm" : "environment",  "svvs" : "v0.0.2",  "svif" : “this is env service”,  "ctg" :“environment”,  "rqdv" : "air-cleaner,robot-vacuum",  "isus" : true,  "rt" : "2017-05-25 13:00:13"  }]  } |

* + 1. 가전기기 등록
       1. Request

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Name** | **Value** | **description** |
| **Header** | to | Mashup | §2.1.1.1 참조 |
| from | Gateway | §2.1.1.1 참조 |
| id | “kw-gw-1” | 고유 아이디 |
| mt | Request | §2.1.1.2 참조 |
| cmd | Create | §2.1.1.3 참조 |
| ct | Home appliance | §2.1.1.4 참조 |
| ctt | JSON | §2.1.1.5 참조 |
| **Data** | haid | “utas-tv-1” | §2.1.2.3 참조 |
| hanm | “TV” | §2.1.2.3 참조 |
| hat | 1 | §2.1.2.3 참조 |
| hafc | “onoff=1,channel=1” | §2.1.2.3 참조 |
| hamf | “utas” | §2.1.2.3 참조 |
| rt | “2017-05-25 13:00:13” | §2.1.2.3 참조 |

* + - 1. Response

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Name** | **Value** | **description** |
| **Header** | to | Gateway | §2.1.1.1 참조 |
| from | Mashup | §2.1.1.1 참조 |
| id | “keti-mashup-1” | 고유 아이디 |
| mt | Response | §2.1.1.2 참조 |
| cmd | Create | §2.1.1.3 참조 |
| ct | Home appliance | §2.1.1.4 참조 |
| ctt | JSON | §2.1.1.5 참조 |
| **Data** | haid | “utas-tv-1” | §2.1.2.3 참조 |
| hanm | “TV” | §2.1.2.3 참조 |
| hat | 1 | §2.1.2.3 참조 |
| hafc | “onoff=1,channel=1” | §2.1.2.3 참조 |
| hamf | “utas” | §2.1.2.3 참조 |
| rt | “2017-05-25 13:00:13” | §2.1.2.3 참조 |

* + - 1. Sample

|  |
| --- |
| {  "to” : “mashup”,  “from” : “gateway”,  "id" : “kw-gw-1”,  “mt” : 0,  “cmd” : 0,  "ct" : 2,  “ctt” : 1,  “data” : {  "haid" : “utas-tv-1”,  "hanm" : “TV”,  "hat" : 1,  "hafc" : “onoff=1,channel=1”,  "hamf" : “utas”,  "rt" : “2017-05-25 13:00:13”  }  } |
| {  "to” : “gateway”  “from” : “mashup”  "id" : “keti-mashup-1”,  “mt” : 1,  “cmd” : 0,  "ct" : 2,  “ctt” : 1,  “data” : {  "haid" : “utas-tv-1”,  "hanm" : “TV”,  "hat" : 1,  "hafc" : “onoff=1,channel=1”,  "hamf" : “utas”,  "rt" : “2017-05-25 13:00:13”  }  } |

* + 1. 서비스 알림
       1. Notification

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Name** | **Value** | **description** |
| **Header** | to | Mashup | §2.1.1.1 참조 |
| from | Mashup | §2.1.1.1 참조 |
| id | “keti-mashup-1” | 고유 아이디 |
| mt | Notification | §2.1.1.2 참조 |
| cmd | Update | §2.1.1.3 참조 |
| ct | Service | §2.1.1.4 참조 |
| ctt | JSON List | §2.1.1.5 참조 |
| **Data** |  | [  {  "svid" : "mash-sv-1"  "svnm" : "environment",  "svvs" : "v0.0.2",  "svif" : “this is env service”,  "ctg" :“environment”,  "rqdv" : "air-cleaner,robot-vacuum",  "isus" : true,  "rt" : "2017-05-25 13:00:13"  }  ] | §2.1.2.5 참조 |

* + - 1. Sample

|  |
| --- |
| {  "to” : “gateway”  “from” : “mashup”  "id" : “keti-mashup-1”,  “mt” : 2,  “cmd” : 2,  "ct" : 4,  “ctt” : 2,  “data” : [  {  "svid" : "mash-sv-1"  "svnm" : "environment",  "svvs" : "v0.0.2",  "svif" : “this is env service”,  "ctg" :“environment”,  "rqdv" : "air-cleaner,robot-vacuum",  "isus" : true,  "rt" : "2017-05-25 13:00:13"  }]  } |

* 1. 게이트웨이, Mirror TV 통신
     1. 스케줄 정보 요청
        1. Request

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Name** | **Value** | **description** |
| **Header** | to | Gateway | §2.1.1.1 참조 |
| from | MirrorTV | §2.1.1.1 참조 |
| id | “keti-mtv-1” | 고유 아이디 |
| mt | Request | §2.1.1.2 참조 |
| cmd | Retrieve | §2.1.1.3 참조 |
| ct | Schedule | §2.1.1.4 참조 |
| ctt | JSON | §2.1.1.5 참조 |
| **Data** | uname | “홍길동” | §2.1.2.9 참조 |

* + - 1. Response

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Name** | **Value** | **description** |
| **Header** | to | MirrorTV | §2.1.1.1 참조 |
| from | Gateway | §2.1.1.1 참조 |
| id | “kw-gw-1” | 고유 아이디 |
| mt | Response | §2.1.1.2 참조 |
| cmd | Retrieve | §2.1.1.3 참조 |
| ct | Schedule | §2.1.1.4 참조 |
| ctt | JSON List | §2.1.1.5 참조 |
| **Data** |  | [  {  "uname" : "홍길동",  "title" : "점심약속",  "date" : "2017-05-25",  "time" : "12:00:00",  "memo" : "회의 및 점심식사",  "rt" : "2017-05-25 13:00:13"  }  ] | §2.1.2.9 참조 |

* + - 1. Sample

|  |
| --- |
| {  "to” : “gateway”,  “from” : “mirror\_tv”,  "id" : “keti-mtv-1”,  “mt” : 0,  “cmd” : 1,  "ct" : 15,  “ctt” : 1,  “data” : {  “uname” : “홍길동”  }  } |
| {  "to” : “mirror\_tv”  “from” : “gateway”  "id" : “kw-gw-1”,  “mt” : 1,  “cmd” : 1,  "ct" : 15,  “ctt” : 2,  “data” : [  {  "uname" : "홍길동",  "title" : "점심약속",  "date" : "2017-05-25",  "time" : "12:00:00",  "memo" : "회의 및 점심식사",  "rt" : "2017-05-25 13:00:13"  }  ]  } |

* + 1. 스케줄 등록
       1. Request

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Name** | **Value** | **description** |
| **Header** | to | Gateway | §2.1.1.1 참조 |
| from | MirrorTV | §2.1.1.1 참조 |
| id | “keti-mtv-1” | 고유 아이디 |
| mt | Request | §2.1.1.2 참조 |
| cmd | Create | §2.1.1.3 참조 |
| ct | Schedule | §2.1.1.4 참조 |
| ctt | JSON | §2.1.1.5 참조 |
| **Data** | uname | “홍길동” | §2.1.2.9 참조 |
| title | "점심약속" | §2.1.2.9 참조 |
| date | "2017-05-25" | §2.1.2.9 참조 |
| time | "12:00:00" | §2.1.2.9 참조 |
| memo | "회의 및 점심식사" | §2.1.2.9 참조 |

* + - 1. Response

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Name** | **Value** | **description** |
| **Header** | to | MirrorTV | §2.1.1.1 참조 |
| from | Gateway | §2.1.1.1 참조 |
| id | “kw-gw-1” | 고유 아이디 |
| mt | Response | §2.1.1.2 참조 |
| cmd | Create | §2.1.1.3 참조 |
| ct | Schedule | §2.1.1.4 참조 |
| ctt | JSON | §2.1.1.5 참조 |
| **Data** | uname | “홍길동” | §2.1.2.9 참조 |
| title | "점심약속" | §2.1.2.9 참조 |
| date | "2017-05-25" | §2.1.2.9 참조 |
| time | "12:00:00" | §2.1.2.9 참조 |
| memo | "회의 및 점심식사" | §2.1.2.9 참조 |
| rt | "2017-05-25 13:00:13" | §2.1.2.9 참조 |

* + - 1. Sample

|  |
| --- |
| {  "to” : “gateway”,  “from” : “mirror\_tv”,  "id" : “keti-mtv-1”,  “mt” : 0,  “cmd” : 0,  "ct" : 15,  “ctt” : 1,  “data” : {  "uname" : "홍길동",  "title" : "점심약속",  "date" : "2017-05-25",  "time" : "12:00:00",  "memo" : "회의 및 점심식사”  }  } |
| {  "to” : “mirror\_tv”  “from” : “gateway”  "id" : “kw-gw-1”,  “mt” : 1,  “cmd” : 0,  "ct" : 15,  “ctt” : 1,  “data” : {  "uname" : "홍길동",  "title" : "점심약속",  "date" : "2017-05-25",  "time" : "12:00:00",  "memo" : "회의 및 점심식사",  “rt" : "2017-05-25 13:00:13"  }  } |

* + 1. 스케줄 삭제
       1. Request

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Name** | **Value** | **description** |
| **Header** | to | Gateway | §2.1.1.1 참조 |
| from | MirrorTV | §2.1.1.1 참조 |
| id | “keti-mtv-1” | 고유 아이디 |
| mt | Request | §2.1.1.2 참조 |
| cmd | Delete | §2.1.1.3 참조 |
| ct | Schedule | §2.1.1.4 참조 |
| ctt | JSON | §2.1.1.5 참조 |
| **Data** | uname | “홍길동” | §2.1.2.9 참조 |
| title | "점심약속" | §2.1.2.9 참조 |

* + - 1. Response

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Name** | **Value** | **description** |
| **Header** | to | MirrorTV | §2.1.1.1 참조 |
| from | Gateway | §2.1.1.1 참조 |
| id | “kw-gw-1” | 고유 아이디 |
| mt | Response | §2.1.1.2 참조 |
| cmd | Delete | §2.1.1.3 참조 |
| ct | Schedule | §2.1.1.4 참조 |
| ctt | JSON | §2.1.1.5 참조 |
| **Data** | uname | “홍길동” | §2.1.2.9 참조 |
| title | "점심약속" | §2.1.2.9 참조 |
| date | "2017-05-25" | §2.1.2.9 참조 |
| time | "12:00:00" | §2.1.2.9 참조 |
| memo | "회의 및 점심식사" | §2.1.2.9 참조 |
| rt | "2017-05-25 13:00:13" | §2.1.2.9 참조 |

* + - 1. Sample

|  |
| --- |
| {  "to” : “gateway”,  “from” : “mirror\_tv”,  "id" : “keti-mtv-1”,  “mt” : 0,  “cmd” : 3,  "ct" : 15,  “ctt” : 1,  “data” : {  "uname" : "홍길동",  "title" : "점심약속"  }  } |
| {  "to” : “mirror\_tv”  “from” : “gateway”  "id" : “kw-gw-1”,  “mt” : 1,  “cmd” : 3,  "ct" : 15,  “ctt” : 1,  “data” : {  "uname" : "홍길동",  "title" : "점심약속",  "date" : "2017-05-25",  "time" : "12:00:00",  "memo" : "회의 및 점심식사",  “rt" : "2017-05-25 13:00:13"  }  } |

* 1. 게이트웨이, 스마트폰 통신
     1. 스마트폰 정보 알림
        1. Notification

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Name** | **Value** | **description** |
| **Header** | to | Gateway | §2.1.1.1 참조 |
| from | Smartphone | §2.1.1.1 참조 |
| id | “keti-sp-1” | 고유 아이디 |
| mt | Notification | §2.1.1.2 참조 |
| cmd | Update | §2.1.1.3 참조 |
| ct | Smartphone | §2.1.1.4 참조 |
| ctt | JSON | §2.1.1.5 참조 |
| **Data** | uname | “홍길동” | §2.1.2.10 참조 |
| lat | 37.407715 | §2.1.2.10 참조 |
| lng | 127.119176 | §2.1.2.10 참조 |
| addr | "경기도 성남시 분당구 야탑동" | §2.1.2.10 참조 |
| time | "13:00:14" | §2.1.2.10 참조 |
| phst | "ON" | §2.1.2.10 참조 |
| sdst | "진동" | §2.1.2.10 참조 |

* + - 1. Sample

|  |
| --- |
| {  "to” : “gateway”,  “from” : “smartphone”,  "id" : “keti-sp-1”,  “mt” : 2,  “cmd” : 2,  "ct" : 5,  “ctt” : 1,  “data” : {  "uname" : "홍길동",  "lat" : 37.407715,  "lng" : 127.119176,  "addr" : "경기도 성남시 분당구 야탑동",  "time" : "13:00:14",  "phst" : "ON",  "sdst" : "진동"  }  } |

* + 1. 스마트 밴드 알림
       1. Notification

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Name** | **Value** | **description** |
| **Header** | to | Gateway | §2.1.1.1 참조 |
| from | Smartphone | §2.1.1.1 참조 |
| id | “keti-sp-1” | 고유 아이디 |
| mt | Notification | §2.1.1.2 참조 |
| cmd | Update | §2.1.1.3 참조 |
| ct | Smart band | §2.1.1.4 참조 |
| ctt | JSON | §2.1.1.5 참조 |
| **Data** | step | 13 | §2.1.2.11 참조 |
| kcal | 2773 | §2.1.2.11 참조 |
| btemp | 36.5 | §2.1.2.11 참조 |
| fdet | 0 | §2.1.2.11 참조 |
| hrate | 65 | §2.1.2.11 참조 |
| state | 1 | §2.1.2.11 참조 |

* + - 1. Sample

|  |
| --- |
| {  "to” : “gateway”,  “from” : “smartphone”,  "id" : “keti-sp-1”,  “mt” : 2,  “cmd” : 2,  "ct" : 16,  “ctt” : 1,  “data” : {  "step" : 13,  "kcal" : 2773,  "btemp" : 36.5,  "fdet" : 0,  "hrate" : 65,  "state" : 1  }  } |

* + 1. QR 코드 전송
       1. Request

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Name** | **Value** | **description** |
| **Header** | to | Gateway | §2.1.1.1 참조 |
| from | Smartphone | §2.1.1.1 참조 |
| id | “keti-sp-1” | 고유 아이디 |
| mt | Request | §2.1.1.2 참조 |
| cmd | Create | §2.1.1.3 참조 |
| ct | QR | §2.1.1.4 참조 |
| ctt | JSON | §2.1.1.5 참조 |
| **Data** | mname | "keti-fan-123" | §2.1.2.12 참조 |

* + - 1. Response

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Name** | **Value** | **description** |
| **Header** | to | Smartphone | §2.1.1.1 참조 |
| from | Gateway | §2.1.1.1 참조 |
| id | “kw-gw-1” | 고유 아이디 |
| mt | Response | §2.1.1.2 참조 |
| cmd | Create | §2.1.1.3 참조 |
| ct | QR | §2.1.1.4 참조 |
| ctt | JSON | §2.1.1.5 참조 |
| **Data** | mname | "keti-fan-123" | §2.1.2.12 참조 |

* + - 1. Sample

|  |
| --- |
| {  "to” : “gateway”,  “from” : “smartphone”,  "id" : “keti-sp-1”,  “mt” : 0,  “cmd” : 0,  "ct" : 6,  “ctt” : 1,  “data” : {  "mname" : "keti-fan-123"  }  } |
| {  "to” : “smartphone”  “from” : “gateway”  "id" : “kw-gw-1”,  “mt” : 0,  “cmd” : 1,  "ct" : 6,  “ctt” : 1,  “data” : {  "mname" : "keti-fan-123"  }  } |

1. **Reference**
   1. 프로토콜 상세정보
      1. Header 정보
         1. Device Name

|  |  |  |
| --- | --- | --- |
| Name | Value (String) | Description |
| BMS | “bms” | 서버 아이디 |
| Gateway | “gateway” | Gateway 아이디 |
| Home Monitoring | “home\_monitoring” |  |
| HomeApplianceInfoDB | “ha\_info\_db” |  |
| Mashup | “mashup” |  |
| MirrorTV | “mirrot\_tv” |  |
| Kiosk | “kiosk” |  |
| Smartphone | “smartphone” |  |

* + - 1. Message Type (mt)

|  |  |  |
| --- | --- | --- |
| Name | Value (Integer) | Description |
| Request | 0 | 요청 |
| Response | 1 | 응답 |
| Notification | 2 | 알림 |

* + - 1. Commend (cmd)

|  |  |  |
| --- | --- | --- |
| Name | Value (Integer) | Description |
| Create | 0 | 저장 |
| Retrieve | 1 | 읽기 |
| Update | 2 | 갱신 |
| Delete | 3 | 삭제 |

* + - 1. Content (ct)

|  |  |  |
| --- | --- | --- |
| Name | Value (Integer) | Description |
| None | 0 |  |
| Device | 1 | 모든 장치 (가전기기, 센서) |
| Home appliance | 2 |  |
| Sensor | 3 |  |
| Service | 4 |  |
| Smartphone | 5 |  |
| QR | 6 |  |
| Smart band | 7 |  |
| Mashup | 8 |  |
| Emergency | 9 |  |
| User | 10 |  |
| Guest | 11 |  |
| Manager | 12 |  |
| BMS | 13 | Building Management Server |
| Gateway | 14 |  |
| Schedule | 15 |  |
| Smart band | 16 |  |

* + - 1. Content Type (ctt)

|  |  |  |
| --- | --- | --- |
| Name | Value (Integer) | Description |
| None | 0 | none |
| JSON | 1 | JSON |
| JSON List | 2 | JSON 리스트 |

* + 1. Data 정보
       1. Building Management Server

|  |  |  |
| --- | --- | --- |
| Name | Value | Description |
| bmsid | “kw-bms-1” | Builder Management Server ID |
| vs | “v0.0.1” | Version |
| dsct | “this is bms” | Description |
| rt | “2017-05-25 13:00:13” | Register Time |

* + - 1. Gateway

|  |  |  |
| --- | --- | --- |
| Name | Value | Description |
| gwid | “home-gateway-6” | Gateway ID |
| bd | “kw-building” | Building |
| flr | “6” | Floor |
| lct | “home” | Location |
| rt | “2017-05-25 13:00:13” | Register Time |

* + - 1. Home appliance

|  |  |  |
| --- | --- | --- |
| Name | Value | Description |
| haid | “utas-tv-1” | Home Appliance Id  (제조사명-가전기기명-가전기기넘버) |
| hanm | “TV” | Home Appliance Name |
| hat | 1 | Home Appliance Type |
| hafc | “onoff=1,channel=1” | Home Appliance Function |
| hamf | “utas” | Home Appliance Manufacturer |
| rt | “2017-05-25 13:00:13” | Register time |

* + - 1. Sensor

|  |  |  |
| --- | --- | --- |
| Name | Value | Description |
| ssid | “maxfor-env-2” | Sensor Id  (제조사명-센서명-센서넘버) |
| ssnm | “environment” | Sensor Name |
| sst | 2 | Sensor Type |
| ssst | “temp=27,hum=28” | Sensor Status |
| ssmf | “maxfor” | Sensor Manufacturer |
| rt | “2017-05-25 13:00:13” | Register time |

* + - 1. Service

|  |  |  |
| --- | --- | --- |
| Name | Value | Description |
| svid | “mash-sv-1” | Service ID |
| svnm | “environment” | Service Name |
| svvs | “v0.0.2” | Service Version |
| svif | “this is env service” | Service Information |
| ctg | “environment” | Category |
| rqdv | “air-cleaner,robot-vacuum” | Requisite Devices |
| isus | true | Is Usable |
| rt | “2017-05-25 13:00:13” | Register Time |

* + - 1. User

|  |  |  |
| --- | --- | --- |
| Name | Value | Description |
| phnb | “01012341234” | Phone number |
| name | “홍길동” | Name |
| afl | “광운대학교” | Affiliate |
| ofc | “603호” | Office |
| type | “교수” | Type |
| crst | “입실” | Current state |
| crlt | “603호” | Current location |
| tagid | 13 | Tag ID |
| rt | “2017-05-25 13:00:13” | Register time |

* + - 1. Guest

|  |  |  |
| --- | --- | --- |
| Name | Value | Description |
| phnb | 01056785678” | Phone number |
| name | “이순신” | Name |
| afl | “KETI” | Affiliate |
| adv | “홍길동” | Adviser |
| vspp | “회의” | Visit purpose |
| rt | “2017-05-25 13:00:13” | Register time |

* + - 1. Manager

|  |  |  |
| --- | --- | --- |
| Name | Value | Description |
| mngid | “keti123” | Manager ID |
| pswd | “12345678” | Password |
| name | “이광운” | Name |
| phnb | “01078907890” | Phone number |
| afl | “광운대학교” | Affiliate |
| rt | “2017-05-25 13:00:13” | Register time |

* + - 1. Schedule

|  |  |  |
| --- | --- | --- |
| Name | Value | Description |
| uname | “홍길동” | User name |
| title | “점심약속” | Title |
| date | “2017-05-25” | Date |
| time | “12:00:00” | Time |
| memo | “회의 및 점심식사” | Memo |
| rt | “2017-05-25 13:00:13” | Register time |

* + - 1. Smartphone

|  |  |  |
| --- | --- | --- |
| Name | Value | Description |
| uname | “홍길동” | User name |
| lat | 37.407715 | Latitude |
| lng | 127.119176 | Longitude |
| addr | “경기도 성남시 분당구 야탑동” | Address |
| time | “13:00:14” | Time |
| phst | “ON” | Phone State |
| sdst | “진동” | Sound State |
| rt | “2017-05-25 13:00:13” | Register time |

* + - 1. Smart band

|  |  |  |
| --- | --- | --- |
| Name | Value | Description |
| step | 13 | Step |
| kcal | 2773 | Calorie |
| btemp | 36.5 | Body temperature |
| fdet | 0 | Fall detect |
| hrate | 65 | Heart rate |
| state | 1 | State |
| rt | “2017-05-25 13:00:13” | Register time |

* + - 1. QR

|  |  |  |
| --- | --- | --- |
| Name | Value | Description |
| mname | “keti-fan-123” | Model name |