

UBio-Alpeta

Real-time event process

UNION COMMUNITY

Real-time event transmission method

: Supports two-way communication between server and client using web socket

- What is the web socket? Web Socket is a structure to do an efficient two-way communication between server and client. It is one of the communication protocol for network and a technical rule for two-way communication defined by the World Wide Web Consortium (W3C) and the Internet Engineering Task Force (IETF), the standardization organizations of the Internet, to define the rules for communication between the server and the client.

How to access to Web Socket

: Access to the Web socket address.

- ws://192.168.0.2:9004/v1/webEntry -> IP address is the server IP installing the Alpeta.

Example of real-time event information data

Event message name: WSCmdTerminalLiveInfo

Received data:

```
{
  msgId: 1102,
  result: 0,
  body: "{
    \"ID\":8,
    \"Status\":25169945,
    \"Type\":37
  }"
}
```

The data including msgId, result, and body(Json) is sent from server to client.

Name	Value	Description
msgId	1102	The real-time event message ID.
result	0 (Fixed)	Server -> Client (0: Fixed)
body		
ID	8	Terminal ID
Status	25169945	Terminal Status value (Refer to the table 2 below.)
Type	37	Terminal type (Refer to the menu of WSCmdTerminalLiveInfo below.)

The types of real-time event

Event name	Event message ID	Description
WSCmdLogoutNotify	1002	Logout
WSCmdLogAuthNotify	1100	Terminal authentication log
WSCmdLogEventNotify	1101	Terminal event log
WSCmdTerminalLiveInfo	1102	Terminal status information
WSCmdServiceStatusNotify	1103	Server status information
WSCmdAuthLogImageNotify	1104	Terminal authentication log image
WSCmdTerminalNoticeSetNotify	1105	Notice for terminal
WSCmdGroupSyncNotify	1106	Change the group information.
WSCmdPositionSyncNotify	1107	Change the position information.
WSCmdTerminalSyncNotify	1108	Change the terminal information.
WSCmdAccessGroupSyncNotify	1109	Change the information of access group.
WSCmdTimezoneSyncNotify	1110	Change the time-zone information.
WSCmdPrivilegeSyncNotify	1112	Change the privilege information.
WSCmdUserMessageSyncNotify	1113	Change the user's message.
WSCmdTerminalLogUploadNotify	1120	The data of importing the terminal log.

WSCmdLogoutNotify (msgId: 1002)

: Sends the logout event from server to web client.

: Received data:

```
{ msgId: 1002, result: 0, body: "{\" UserId \":1000000000000000000,\" Type \":0}"}
```

Name	Value	Description
msgId	1002	Real-time event message ID
result	0 (Fixed)	Server -> Client (0: Fixed)
body		
UserId	10000000...	User ID
Type	0	The types of logout 0: When the control server to ask log-in is different or when requesting the web log-in newly. 1: Request the automatic log-out by initializing since there wasn't login extension for 30 minutes. 2: When deleting the log-in users

WSCmdLogAuthNotify (msgId: 1100)

: When the user authenticates at the terminal, an event occurs that sends an authentication log to the monitoring page

: Received data:

```
{msgId: 1100, result: 0, body: {"IndexKey":0,"TerminalID":3,"UserID":"","UserID":0,"UserName":"","UniqueID":"","EventTime":"2019-12-20 17:45:13","ServerRecordTime":"1970-01-01 00:00:00","AuthType":2,"AuthResult":1,"Func":3,"FuncType":0,"Card":"","UserType":0,"IsPicture":1,"Property":"1000","Latitude":0,"Longitude":0,"GroupName":"","PositionName":""}}}
```

Name	Value	Description
msgId	1100	Real-time event message ID
result	0	Server -> Client (0: Fixed)
body		
IndexKey	0	The index for saving DB (0: Fixed)
TerminalID	8	The registered terminal ID
UserID	"1" or ""	User ID (If unregistered, "")
UserName	"Tom"	User name
UniqueID	"19-0153"	Unique ID
EventTime	"2019-12-20 17:45:13"	Event occurrence time
ServerRecordTime	"1970-01-01 00:00:00"	DB saving time (No use)
AuthType	2	Authentication type 1: FP 1:1 authentication 2: FP 1:N authentication 3: Password authentication 4: Card authentication 5: Face 1:1 authentication 6: Face 1:N authentication 7: Mobile card 8: QR code

		11: Request the authentication type of ID or Unique ID
AuthResult	1	Authentication result 0: Success 1: Fail 2: Not available to access 3: Time out 4: Capture time out 5: 1:N time out 6: Not available for anti-pass back 7: Duress 8: Blacklist
Func	3	Function key 1: F1 2: F2 3: Access 4: F3 5: F5 TnA 11: Attend 12: Leave 13: In 14: Out 15: Return Meal 21: Menu 1 22: Menu 2 23: **** 24: Menu 3 25: Menu 4
FuncType	0	Function type (No use)
Card	"A01032" or ""	Authentication card number
UserType	0	User type (0: Fixed)
IsPicture	1	The flag to whether there is an image or not
Property	"1000"	1000 (Fixed)
Latitude	0	The latitude when uploading the authentication log from V-Terminal (Smartphone) / (Not currently available)
Longitude	0	The longitude when uploading the authentication log from V-Terminal (Smartphone) / (Not currently available)
GroupName	"Group name"	Group name
PositionName	"Position name"	Position name

WSCmdLogEventNotify (msgId: 1101)

: When other events such as door opening or fire occur in the terminal

: Received data:

{msgId: 1101, result: 0, body:

"{"TerminalID":8,"EventTime":"2019-12-23 10:16:41","Category":2,"Content":131083,"Detail":""}"}

Name	Value	Description
msgId	1101	Real-time event message ID
result	0 (Fixed)	Server -> Client (0: Fixed)
body		
TerminalID	8	Terminal ID
EventTime	2019-12-23 10:16:41	Event occurrence time
Category	2	Event category -> 1: Terminal, 2: Door for access, 3: Emergency situation, 4: External signal, 5: System
Content	131083	Event category (Refer to the table 1 below.)
Detail		Detailed information

WSCmdTerminalLiveInfo (msgId: 1102)

: Imports the terminal status information periodically. (Every 10 seconds)

: Received data:

```
{ msgId: 1102, result: 0, body: "[{"ID":8, "Status":25169945, "Type":37}]"}}
```

Name	Value	Description
msgId	1102	Real-time event message ID
result	0 (Fixed)	Server -> Client (0: Fixed)
body		
ID	8	Terminal ID
Status	25169945	Terminal status value (Refer to the table 2 below.)
Type	37	Terminal type information 2 : NAC 2500 3 : NAC 3000 4 : NAC 2500 (4MF) 6 : NAC 5000 9 : NAC 1500 18 : T5 19 : T3 20 : T1 22 : T9 23 : FKA2 24 : eNCardi 25 : T2 26 : UBio-X Slim (Nitgen) 30 : AC1100 31 : AC2000 32 : AC2200 33 : AC5000 34 : AC5100 35 : AC7000 36 : UBio-X Pro Lite 37 : UBio-X Pro 38 : AC6000 39 : UBioTablet5 40 : UBio-X Slim (Virdi)

WSCmdServiceStatusNotify (msgId: 1103)

: Gets periodically the system status information.

```
: Received data:
```

[illegible]

(When having the data below)

Name	Value	Details
msgId	1103	Real-time event message ID
result	0	Server -> Client (0: Fixed)
body		
DSInfo		
- ServerID	1	Server ID
- ServerType	1	
- ServerMode	1	
- t		
- seconds	1576735379	
- nanos	154753900	
- DBStat		
- User		
- curCnt	0	The number of users
- Term		
- curCnt	8	The number of terminals
- Auth		
- curCnt	0	
- Sys		
- curCnt	0	
- SystemStat		
- ServerID	1	Server ID
- totalMemory	7	Total memory capacity
- usedMemory	73.00	Used memory capacity
- idleCPU	53	CPU free capacity
CSInfo		
- ServerID	11	Server ID
- totalMemory	7	Total memory capacity
- usedMemory	73.00	Used memory capacity
- idleCPU	53	CPU free capacity
ASInfo		
- ServerID	100	Server ID
- ServerType	0	
- ServerMode	0	
- t	null	
- DBStat	null	

- SystemStat		
- ServerID	0	Server ID
- totalMemory	7	Total memory capacity
- usedMemory	73.00	Used memory capacity
- idleCPU	93506.34	CPU free capacity
FPStatInfo		
- curMinute	2	
- fpTotal	0	The number of server FP authentication
- fpReqCount	[0,0,0,0,0,0,0...]	
- fpProcessTime	[0,0,0,0,0,0,0...]	
TaskInfo	null	

WSCmdAuthLogImageNotify (msgId: 1104)

When authenticating in terminal while the terminal monitoring detail page is opened, the image taken on the terminal camera is transmitted. (The event doesn't occur when the terminal authentication mode is 'terminal' mode.)

Received data:

```
{msgId: 1104, result: 0, body:
{"header":{"cmdId":1093673220,"uniqueKey":4294967295,"result":0,"DesType":1,"DesID":0,
"UserID":0,"brandType":1},"TerminalID":8,"LogIndex":201912000000089,"TerminalLogIndex":0,
"EventTime":{"seconds":1577062673},"PictureInfo":{"Type":"jpg","Length":6490,"Data":"/9j/4AAQSk
ZJRgABAQAAQABAAD/2wBDABALDA4MChAODQ4SERATGCgaGBYWGDEjJR0oOjM9PDkzODdASFxOQ
ERXRTc4UG1RV19iZ2hnPk1xeXBkeFxlZ2P//2Q==..."}}}
```

(When having the data below)

Name	Value	Description
msgId	1104	Real-time event message ID
result	0	Server -> Client (0: Fixed)
body		
header		
- cmdId	1093673220	
- uniqueKey	42949672...	
- result	0	
- DesType	1	
- DesID	0	
- UserID	0	
- brandType	1	
TerminalID	8	Terminal ID
LogIndex	201912000000089	
TerminalLogIndex	0	
EventTime		
- seconds	1577062673	
PictureInfo		
- Type	jpg	
- Length	6490	
- Data	/9j/4AAQSkZ...	

WSCmdTerminalNoticeSetNotify (msgId: 1105)

: When sending the notice from the notice management page to terminal

: Received data :

```
{ msgId: 1105, result: 0, body: "{\"TerminalID\":8}"}
```


Name	Value	Description
msgId	1105	Real-time event message ID
result	0	Server -> Client (0: Fixed)
body		
TerminalID	8	Terminal ID

WSCmdGroupSyncNotify (msgId: 1106)

: When adding the group in the group management page

: Received data :

```
{ msgId: 1106, result: 0, body: '{"SyncType":1,"GroupInfo":{"GroupID":2,"Parent":1,"Name":"test1","Description":""}}' }
```

 (When having the data below)

Name	Value	Description
msgId	1106	Real-time event message ID
result	0	Server -> Client (0: Fixed)
body		
SyncType	1	Type 1 : insert 2 : update 3 : delete
GroupInfo		
- GroupID	2	Group ID
- Parent	1	The ID of parent group
- Name	test1	Group name
- Description		Description

WSCmdPositionSyncNotify (msgId: 1107)

: When clicking [**Apply**] button after adding the position in position management page

: Received data :

```
{ msgId: 1107, result: 0, body: '{"SyncType":1,"PositionInfo":{"PositionID":3,"Name":"test456"}}' }
```

 (When having the data below)

Name	Value	Description
msgId	1107	Real-time event message ID
result	0	Server -> Client (0: Fixed)
body		

SyncType	1	Type 1 : insert 2 : update 3 : delete
PositionInfo		
- PositionID	3	Position ID
- Name	test456	Position name

WSCmdTerminalSyncNotify (msgId: 1108)

: When adding the terminal in terminal management page

: Received data :

```
{msgId: 1108, result: 0, body: "{\"SyncType\": 1, \"TerminalInfo\": {\"ID\": 10, \"Name\": \"10\", \"GroupCode\": 0, \"Status\": 16, \"Type\": 0, \"FuncType\": 0, \"IPAddress\": \"\", \"MacAddress\": \"\", \"Version\": \"\", \"RemoteDoor\": 0, \"UTCIndex\": 0, \"Description\": \"\"}}\"}
```

(When having the data below)

Name	Value	Description
msgId	1108	Real-time event message ID
result	0	Server -> Client (0: Fixed)
body		
SyncType	1	Type 1 : insert // add 2 : update 3 : delete 4 : insert // unRegist
TerminalInfo		
- ID	10	Terminal ID
- Name	10	Terminal name
- GroupCode	0	Group code
- Status	16	Terminal status value, No use
- Type	0	Terminal type
- FuncType	0	Function key, No use
- IPAddress		IP address
- MacAddress		Mac address
- Version		Terminal version
- RemoteDoor	0	Remote door, No use
- UTCIndex	0	UTC information, No use
- Description		Description, No use

WSCmdAccessGroupSyncNotify (msgId: 1109)

: Add the access group in the access group management page

-> The event occurs when clicking [**Save**] button after setting

: Received data :

```
{ msgId: 1109, result: 0, body: "{\"SyncType\":1,\"AccessGroupInfo\":{\"ID\":3, \"Name\":\"Access group 3\", \"TimezoneID\":0}}\"}
```

■ (When having the data below)

Name	Value	Description
msgId	1109	Real-time event message ID
result	0	Server -> Client (0: Fixed)
body		
SyncType	1	Type 1 : insert 2 : update 3 : delete
AccessGroupInfo		
- ID	3	Group ID
- Name	Access group 3	Group name
- TimezoneID	0	Time zone ID

WSCmdTimezoneSyncNotify (msgId: 1110)

: When clicking [Save] button after adding the time zone in time zone management page

: Received data :

```
{msgId: 1110, result: 0, body: "{\"SyncType\": 2, \"TimezoneInfo\": {\"TimezoneID\": 1, \"Name\": \"New\", \"HolidayID\": 2, \"Holiday\": 1, \"Sunday\": 1, \"Monday\": 1, \"Tuesday\": 1, \"Wednesday\": 1, \"Thursday\": 1, \"Friday\": 1, \"Saturday\": 1}}\"}
```

(When having the data below)

Name	Value	Description
msgId	1110	Real-time event message ID
result	0	Server -> Client (0: Fixed)
body		
SyncType	2	Type 1 : insert 2 : update 3 : delete
TimezoneInfo		
- TimezoneID	1	Time zone ID
- Name	New	Time zone name
- HolidayID	2	Holiday ID
- Holiday	1	Holiday (1 : Fixed)
- Sunday	1	Sunday (1 : Fixed)
- Monday	1	Monday (1 : Fixed)
- Tuesday	1	Tuesday (1 : Fixed)
- Wednesday	1	Wednesday (1 : Fixed)
- Thursday	1	Thursday (1 : Fixed)
- Friday	1	Friday (1 : Fixed)
- Saturday	1	Saturday (1 : Fixed)

WSCmdPrivilegeSyncNotify (msgId: 1112)

: When clicking [Save] button after adding the privilege in admin management page

: Received data :

```
{msgId: 1112, result: 0, body:
{"SyncType":1,"PrivilegeInfo":{"PrivilegeID":1237,"Name":"test123","Description":"test1","Monitoring":
{"Permit":0,"Client":0,"TerminalStatus":0,"Auth":0,"Event":0},"Terminal":{"Permit":1,"Regist":1,"Upd
ate":1,"Delete":1,"FW":0,"Option":0,"SetManager":0,"UserFile":0},"User":{"Permit":1,"Regist":1,"Upd
ate":1,"Delete":1,"TerminalUser":0,"RegistAdmin":0},"Group":{"Permit":1,"Regist":1,"Update":1,"Dele
te":1,"User":0},"Guest":{"Permit":0,"Regist":0,"Update":0,"Delete":0},"Blacklist":{"Permit":0,"Change
":0,"Release":0,"Update":0,"Delete":0},"AccessControl":{"Permit":0,"Set":0},"Map":{"Permit":0,"Set":
```

```
0}, "TNA": {"Permit": 0, "Set": 0, "Special": 0, "Manage": 0, "OutState": 0, "OutExcRecord": 0, "Summary": 0, "SendResult": 0, "DeleteResult": 0}, "Log": {"Permit": 0, "Delete": 0, "BackupRestore": 0}, "Meal": {"Permit": 0, "DeleteResult": 0, "ViewGroup": 0, "ViewPersonal": 0, "Set": 0}, "Option": {"Permit": 0, "Local": 0, "Server": 0, "Password": 0, "Mail": 0, "TNA": 0}, "GroupInfo": {"GroupID": 0, "Parent": 0, "Name": "", "Description": ""}}}
```

(When having the data below)

Name	Value	Description
msgId	1112	Real-time event message ID
result	0	Server -> Client (0: Fixed)
body		
SyncType	1	Type 1 : insert 2 : update 3 : delete
PrivilegeInfo		
- PrivilegeID	1237	Privilege ID
- Name	test123	Privilege name
- Description	test1	Description
- Monitoring		
- Permit	0	Whether to permit or not (If checked, 1 : Fixed)
- Client	0	Client
- TerminalStatus	0	Terminal status
- Auth	0	Authentication log
- Event	0	Event log
- Terminal		
- Permit	1	(If checked, 1 : Fixed)
- Regist	1	Registration
- Update	1	Modification
- Delete	1	Deletion
- FW	0	Apply the FW.
- Option	0	Option setting
- SetManager	0	Set the admin.
- UserFile	0	User file
- User		
- Permit	1	(If checked, 1 : Fixed)
- Regist	1	Registration
- Update	1	Modification
- Delete	1	Deletion
- TerminalUser	0	Terminal user
- RegistAdmin	0	User file
- Group		
- Permit	1	(If checked, 1 : Fixed)
- Regist	1	Registration
- Update	1	Modification
- Delete	1	Deletion
- User	0	User
- Guest		
- Permit	0	(If checked, 1 : Fixed)
- Regist	0	Registration
- Update	0	Modification
- Delete	0	Deletion
- Blacklist		
- Permit	0	(If checked, 1 : Fixed)

- Change	0	Modification
- Release	0	Release
- Update	0	Change
- Delete	0	Deletion
- AccessControl		
- Permit	0	(If checked, 1 : Fixed)
- Set	0	Registration
- Map		
- Permit	0	(If checked, 1 : Fixed)
- Set	0	Set the draft.
- TNA		
- Permit	0	(If checked, 1 : Fixed)
- Set	0	Set the TNA.
- Special	0	Set the special shift.
- Manage	0	TNA management
- OutState	0	Search the working status.
- OutExcRecord	0	Search the exclusion report.
- Summary	0	Manage the TNA summary.
- SendResult	0	Send the TNA result.
- DeleteResult	0	Delete the TNA result.
- Log		
- Permit	0	(If checked, 1 : Fixed)
- Delete	0	Deletion
- BackupRestore	0	Restoration
- Meal		
- Permit	0	(If checked, 1 : Fixed)
- DeleteResult	0	Search the meal report.
- ViewGroup	0	Search the meal by group.
- ViewPersonal	0	Search the meal by individual.
- Set	0	Setting
- Option		
- Permit	0	(If checked, 1 : Fixed)
- Local	0	Area
- Server	0	Server
- Password	0	Password
- Mail	0	Mail
- TNA	0	TNA
- GroupInfo		
- GroupID	0	Group ID
- Parent	0	The parent group's ID
- Name		Group name
- Description		Description

WSCmdUserMessageSyncNotify (msgId: 1113)

: When adding the user message in user message management page

: Received data:

```
{ msgId: 1113, result: 0, body: {"SyncType":1,"UserMessageInfo":{"MessageID":2,
                                "Message":"test1234"}}}
```

 (When having the data below)

Name	Value	Description
msgId	1113	Real-time event message ID
result	0	Server -> Client (0: Fixed)
body		
SyncType	1	Type 1 : insert 2 : update 3 : delete
UserMessageInfo		
- MessageID	2	Message ID
- Message	test1234	Message contents

WSCmdTerminalLogUploadNotify (msgId: 1120)

: When clicking [Import] after checking the terminal in Terminal log page

: Received data :

```
{ msgId: 1120, result: 0, body: "{\"terminalID\":8, \"total\":2397, \"offset\":2384, \"count\":13}\"}
```

Name	Value	Description
msgId	1120	Real-time event message ID
result	0	Server -> Client (0: Fixed)
body		
terminalID	8	Terminal ID
total	2397	The number of total logs.
offset	2384	The number of current log (It doesn't import the number of total log of terminal but does the number of count in order.
count	13	The number of log to import at once

Table 1 – Event code

Event code	Event name	Event code	Event name
65537	Terminal Disconnected	196614	Panic Sensor End
65538	Terminal Connected	196615	Crisis Sensor Start
65539	Terminal Locked	196616	Crisis Sensor End
65540	Terminal Unlocked	196617	Blacklist authentication trial
65541	Terminal Tamper	196624	Threat
65542	Terminal Attached	196625	System error
65543	Terminal Lockdown	196626	Door warning
131073	Door Open	196627	Door 2 open warning
131074	Door Close	196628	Door 2 emergency warning
131075	Door Unlock	196629	Release the door 2 open warning.
131076	Door Locked	196630	Fire Sensor Start
131077	Door Forced	196631	Panic Sensor Start
131078	Open too long	196632	Panic Sensor End
131079	Door Restored	196633	Fire Sensor End
131080	Lock Error	196640	FP device error
131081	Not Monitoring	196641	DB Error
131083	Door open	196642	RTC Error
131084	Remove the door open.	196643	Touch Error
131088	Operate the door open.	262145	External Sensor 1 Start
131089	Operate to remove the door lock.	262146	External Sensor 1 End
131090	Operate the door lock.	262147	External Sensor 2 Start
131091	Door change	262148	External Sensor 2 End
131092	Open button pressed in Door 1.	262149	External Sensor 3 Start
131093	Door 2 Open	262150	External Sensor 3 End
131094	Door 2 Closed	262151	External Sensor 4 Start
131095	Open button pressed in Door 2.	262152	External Sensor 4 End
131096	Remove the open too long.	327681	Change the FP device setting.
196609	Arm	327682	Change the UI setting.
196610	Disarm	327683	Change the system.
196611	Fire Sensor Start	327684	Change the time.
196612	Fire Sensor End	327685	Change the fixed setting.
196613	Panic Sensor Start	327686	Change the all options.

Table 2 – Alpeta Terminal Status

Status name	SHIFT	Description
TerminalStatusConnect	1 << 0	Connection - 0: Disconnection, 1: Connection
TerminalStatusRegist	1 << 4	Registration status - 0: Unregistered, 1: Registered
TerminalStatusIDConflict	1 << 5	ID conflict - 0: Normal 1: ID conflict
TerminalStatusInvalidType	1 << 6	The registered terminal type is different. - 0: Normal, 1: Different
TerminalStatusSyncUserIDLen	1 << 15	The length of user ID

		- 0: Matched, 1: Different
TerminalStatusSyncMacAddress	1 << 16	Mac Address - 0: Normal, 1: Different
TerminalStatusSyncUserCount	1 << 17	The number of user - 0: Normal, 1: Different
TerminalStatusSyncFWVersion	1 << 18	FW version - 0: Normal, 1: Different
TerminalStatusDoor	1 << 7	Door - 0: Closed, 1: Open
TerminalStatusDoorEmergency	1 << 8	Door Forced - 0: Normal, 1: Forced
TerminalStatusDoorOpenWarn	1 << 9	Open too long - 0: Normal, 1: Open too long
TerminalStatusDoorLookState	1 << 10	Status - 0: Locked, 1: Open
TerminalStatusDoorLockWorking	1 << 11	Operation - 0: Normal, 1: Abnormal
TerminalStatusDoorNotMonitoring	1 << 23	When door status cannot be monitored
TerminalStatusDoorOpenState	1 << 24	The status of door open (By the command of door open)
TerminalStatusLock	1 << 1	Lock - 0: Open, 1: Lock
TerminalStatusLockForce	1 << 2	Lockdown - 0: Normal, 1: Lockdown
TerminalStatusCover	1 << 3	Cover - 0: Attached, 1: Terminal tamper
TerminalStatusWarnFire	1 << 12	Fire - 0: Normal, 1: Fire
TerminalStatusWarnPanic	1 << 13	Panic - 0: Normal, 1: Panic
TerminalStatusWarnCrisis	1 << 14	Crisis - 0: Normal, 1: Crisis

 Connection status
  Door
  Door lock
  Warning