Fudo Enterprise 5.6 - API documentation

Fudo Security

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CONTENTS

1 About Documentation **1**

2 API Overview **2**
2.1 API Purpose . . . 2
2.2 API Nomenclature . . . 2
2.3 Request Format . . . 3
2.4 Methods . . . 4
2.5 Possible Responses . . . 4
2.6 Endpoints and Objects Specification . . . 5
2.7 Parameters . . . 8
2.8 Attribute's Properties . . . 14
2.9 API BETA Endpoints . . . 18

3 API v2: Authentication **19**
3.1 How To Authenticate Using an API Key . . . 19
3.2 Access Rights Restrictions . . . 19

4 API v2: Role-Based Access Control and User Groups NEW **20**
4.1 API v2: Definitions **NEW** . . . 20
4.2 API v2: Privileges **NEW** . . . 20
4.3 API v2: Roles **NEW** . . . 22
4.4 API v2: User-Role Assignment **NEW** . . . 27
4.5 API v2: Groups **NEW** . . . 31
4.6 API v2: Group-Safe Assignment **NEW** . . . 35
4.7 API v2: Group-Safe-TimePolicy Management **NEW** . . . 39
4.8 API v2: Group-User Assignment **NEW** . . . 43
4.9 API v2: Object Rights **NEW** . . . 47
4.10 API v2: Access Rights **NEW** . . . 49
4.11 API v2: Role-Based Capabilities **NEW** . . . 57
4.12 API v2: User-Based Capabilities **NEW** . . . 64

5 API v2: Accounts **71**
5.1 Data Structures: *AccountModel* . . . 71
5.2 Retrieve Available Attributes of the *AccountModel* . . . 76
5.3 Create an Account . . . 76
5.4 Get Accounts List . . . 77
5.5 Get an Account . . . 77
5.6 Modify an Account . . . 77
5.7 Adding a Password Changer Policy to Account . . . 78

5.8 Modify Password Change Parameters for Account . . . 78
5.9 Delete an Account . . . 79
5.10 Managing Security Alerts . . . 79

6 API v2: Account-Safe-Listener Assignment 80
6.1 Data Structures: *AccountSafeListenerAssignmentModel* . . . 81
6.2 Retrieve Available Attributes of the *AccountSafeListener- AssignmentModel* . . . 81
6.3 Get Account-Safe-Listener Assignment List . . . 82
6.4 Get Account-Safe-Listener Assignment by ID's . . . 83
6.5 Create an Account-Safe-Listener Assignments . . . 83
6.6 Modify an Account-Safe-Listener Assignment . . . 84
6.7 Delete an Account-Safe-Listener Assignment . . . 84

7 API v2: Account Notes 86
7.1 Data Structures . . . 86
7.2 Retrieve Available Attributes of the *AccountNoteModel* . . . 86
7.3 Get a Note From Account . . . 86
7.4 Assign Note to an Account . . . 87
7.5 Modify a Note . . . 87
7.6 Deleting a Note . . . 88

8 API v2: Managing Password Changers and Remote Apps in Accounts NEW 89
8.1 Data Structures . . . 89
8.2 Retrieve Available Attributes of the *AccountScriptModel* . . . 90
8.3 Get Password Changers and Remote Apps Assigned to Accounts . . . 90
8.4 Get Password Changer or Remote App Assigned to an Account by Assignment ID 92
8.5 Assign Password Changer or Remote App to an Account . . . 92
8.6 Modify Password Changer or Remote App Assignment for an Account . . . 93
8.7 Delete Password Changer or Remote App Assignment from an Account . . . 94

9 API v2: Users 95
9.1 Data Structures: *UserModel* . . . 95
9.2 Get Available Attributes of the *UserModel* . . . 97
9.3 Data Structures: *UserSafeAssignmentModel* . . . 97
9.4 Retrieve Available Attributes of the *UserSafeAssignmentModel* . . . 98
9.5 Data Structures: *UserSafeTimePolicyAssignmentModel* . . . 99
9.6 Retrieve Available Attributes of the *UserSafeTimePolicy - AssignmentModel* . . . 99
9.7 Create a User . . . 99
9.8 Get Users List . . . 100
9.9 Get a User . . . 101
9.10 Modify a User . . . 101
9.11 Get User-Safe Assignments List . . . 102
9.12 Create a User-Safe Assignment . . . 102
9.13 Get Users' Time Policy Settings Within Safes . . . 102
9.14 Get Users' Time Policy Settings Within Safes by ID . . . 103
9.15 Modify User's Time Policy Settings Within a Safe . . . 104
9.16 Create User's Time Policy Settings Within a Safe . . . 104
9.17 Delete User's Time Policy Settings Within a Safe . . . 104
9.18 Delete User-Safe Assignment . . . 105
9.19 Delete User . . . 105

10 API v2: User Authentication Methods Management 106

10.1 Retrieve Available Attributes of the *UserAuthentication - MethodModel* 108
10.2 Listing User Authentication Configurations 108
10.3 Listing Authentication Configurations for User 109
10.4 Retrieve User Authentication Configuration by ID 110
10.5 Create User Authentication Method 110
10.6 Modify User Authentication Method 112
10.7 Deleting User Authentication Method 113

11 API v2: User Devices NEW **114**
11.1 Data Structures 114
11.2 Retrieve Available Attributes of the *UserDeviceModel* 114
11.3 Update Mobile Device for Authentication Method 115

12 API v2: User Mobile Access (Fudo Officer) NEW **116**
12.1 Get the User Mobile Access Status 116
12.2 Delete User Mobile Access Binding 117

13 API v2: External Authentication **118**
13.1 Data Structures 118
13.2 Retrieve Available Attributes of the *ExternalAuthentication- Model* 119
13.3 Get External Authentication Methods List 120
13.4 Get External Authentication Method by ID 121
13.5 Modify External Authentication Method 122
13.6 Create an External Authentication Method 122
13.7 Delete an External Authentication Method 123

14 API v2: Servers **124**
14.1 Data Structures 124
14.2 Retrieve Available Attributes of the *ServerModel* 129
14.3 Create a Server 130
14.4 Get Servers List 130
14.5 Get a Server 130
14.6 Modify a Server 131
14.7 Deleting a Server 131

15 API v2: Pools **132**
15.1 Data Structures 132
15.2 Retrieve Available Attributes of the *PoolModel* 133
15.3 Get Pools List 133
15.4 Get a Pool 134
15.5 Create a Pool 134
15.6 Modify a Pool 135
15.7 Deleting a Pool 135

16 API v2: Pool-Server Assignment **136**
16.1 Data Structures 136
16.2 Retrieve Available Attributes of the *ServerPoolModel* 136
16.3 Get Pool-Server Assignment List 137
16.4 Get Pool-Server Assignment List by ID's 137
16.5 Adding a Server to the Pool 138
16.6 Deleting a Server From a Pool 138

17 API v2: Safes **139**

17.1 Data Structures . . . 139
17.2 Get Available Attributes of the `SafeModel` . . . 142
17.3 Data Structures: *UserSafeAssignmentModel* . . . 142
17.4 Retrieve Available Attributes of the *UserSafeAssignmentModel* . . . 143
17.5 Data Structures: *UserSafeTimePolicyAssignmentModel* . . . 144
17.6 Retrieve Available Attributes of the *UserSafeTimePolicy - AssignmentModel* . . . 144
17.7 Retrieve Available Attributes of the *SafePolicyAssignmentModel* . . . 145
17.8 Get Safes List . . . 145
17.9 Create a Safe . . . 146
17.10 Get a Safe . . . 147
17.11 Modify a Safe . . . 148
17.12 Delete a Safe . . . 148
17.13 Get Users' Time Policy Settings Within Safes . . . 148
17.14 Modify a User's Time Policy Settings Within a Safe . . . 149
17.15 Get User's Settings Within a Safe . . . 150
17.16 Modify a User Within a Safe . . . 150
17.17 Delete a User From a Safe . . . 150
17.18 Get Users Allowed to Manage Selected Safe . . . 150
17.19 Get Account-Safe-Listener Assignments List . . . 150
17.20 Create an Account-Safe-Listener Assignments . . . 151
17.21 Delete an Account-Safe-Listener Assignment . . . 151
17.22 Get Safe-Policy Assignments List . . . 151
17.23 Checking Safe-Policy Assignment by ID . . . 152
17.24 Create an Safe-Policy Assignments . . . 153
17.25 Delete a Safe-Policy Assignment . . . 153

18 API v2: Discovery NEW **154**
18.1 Discovery Scanner **NEW** . . . 156
18.2 Discovery Rule **NEW** . . . 161
18.3 Retrieve Available Attributes of the *DiscoveryRuleModel* . . . 161
18.4 Get Rules List . . . 162
18.5 Get Rule by ID . . . 162
18.6 Create Rule . . . 163
18.7 Modify Rule . . . 164
18.8 Delete Rule . . . 164
18.9 Discovery Scanner-Rule Assignment **NEW** . . . 165
18.10 Discovery Rule-Listener Assignment **NEW** . . . 169
18.11 Discovery Rule-Pool Assignment **NEW** . . . 172
18.12 Discovery Rule-Safe Assignment **NEW** . . . 175
18.13 Managing Discovery State . . . 177

19 API v2: Password Changer Policy **183**
19.1 Data Structures . . . 183
19.2 Retrieve Available Attributes of the *PasswordPolicyModel* . . . 184
19.3 Get Password Changer Policies List . . . 184
19.4 Get Password Change Policy by ID . . . 185
19.5 Defining Password Change Policy . . . 185
19.6 Modify Password Change Policy . . . 186
19.7 Deleting Password Change Policy . . . 187

20 API v2: Password Changers **188**
20.1 Data Structures . . . 188

20.2 Retrieve Available Attributes of the *PasswordChangerModel* . . . 189
20.3 Get Password Changers List . . . 189
20.4 Get Password Changer by ID . . . 190
20.5 Defining Password Changer . . . 191
20.6 Modify Password Changer . . . 192
20.7 Triggering Password Change for the Account . . . 193
20.8 Deleting Password Changer . . . 193

21 API v2: Policies and Regular Expressions 195
21.1 Regular Expressions . . . 195
21.2 Policies . . . 199
21.3 Managing Regular Expressions Assignment . . . 203

22 API v2: Downloads 207
22.1 Data Structures . . . 207
22.2 Retrieve available attributes of the *SessionFileModel* . . . 208
22.3 Retrieve Available Attributes of the *SessionMovieModel* . . . 209
22.4 Get Session Files List . . . 209
22.5 Get Session Recordings List . . . 210
22.6 Downloading Session Files . . . 211
22.7 Downloading Session Recordings . . . 211
22.8 Deleting Session File . . . 212
22.9 Deleting Session Recording . . . 212

23 API v2: Remote Applications 213
23.1 Data Structures . . . 213
23.2 Retrieve Available Attributes of the *RemoteApplicationsModel* . . . 213
23.3 Get Remote Applications Definitions List . . . 214
23.4 Get Remote Applications Definitions List by ID . . . 214
23.5 Defining Remote Applications Definition . . . 215
23.6 Modify Remote Applications Definition . . . 215
23.7 Deleting a Remote Application Definition . . . 216

24 API v2: Sessions NEW 217
24.1 API v2: Sessions Management . . . 217
24.2 API v2: Sharing Sessions **NEW** . . . 223
24.3 API v2: Revoking Sharing Sessions **NEW** . . . 226
24.4 API v2: Terminating Sessions **NEW** . . . 227
24.5 API v2: Session Text **NEW** . . . 228
24.6 API v2: Session OCR **NEW** . . . 230
24.7 API v2: Session Comment **NEW** . . . 233
24.8 API v2: Sessions Approval **NEW** . . . 237
24.9 API v2: Restoring Session **NEW** . . . 239
24.10 API v2: Session Last Activity **NEW** . . . 240
24.11 API v2: Session Data Replication **NEW** . . . 241
24.12 API v2: Session Timestamping **NEW** . . . 244
24.13 API v2: Session Download **NEW** . . . 247
24.14 API v2: Session Backup . . . 248
24.15 API v2: Session SCP File **NEW** . . . 249

25 API v2: Access Request 252
25.1 Data Structures . . . 252

25.2 Retrieve Available Attributes of the *AccessRequestModel* . . . 253
25.3 Retrieve Available Attributes of the *AccessRequestVoteModel* . . . 254
25.4 Retrieve Available Attributes of the *AccessRequestRevokeModel* . . . 254
25.5 Get Access Requests List . . . 255
25.6 Revoking Access Requests . . . 255
25.7 Responding to a Pending Access Request . . . 255

26 API v2: Reports **257**
26.1 Data Structures: *ReportModel* . . . 257
26.2 Retrieve Available Attributes of the *ReportModel* . . . 258
26.3 Data Structures: *DefinedReportSubscriptionModel* . . . 258
26.4 Retrieve Available Attributes of the *DefinedReportSubscriptionModel* . . . 258
26.5 Data Structures: *DefinedReportModel* . . . 259
26.6 Retrieve Available Attributes of the *DefinedReportModel* . . . 259
26.7 Get List of Generated Reports . . . 259
26.8 Get List of Predefined Report Definitions . . . 260
26.9 Get List of Subscriptions to Periodic Reports . . . 260
26.10 Get or Download Report File . . . 260
26.11 Subscribe to a Periodic Report . . . 261
26.12 Create New Report Definition (Custom Filter) . . . 262
26.13 Generate User Report on Demand . . . 263
26.14 Update Report Definition (Custom Filter) . . . 263
26.15 Delete Generated User Report . . . 264
26.16 Delete Report Definition (Custom Filter) . . . 265
26.17 Unsubscribe from a Recurring Report . . . 265

27 API v2: User Productivity Analytics NEW **266**
27.1 Data Structures . . . 267
27.2 Retrieve Available Attributes of the *ProductivityModel* . . . 267
27.3 Get User Productivity Analytics . . . 268

28 API v2: Listeners **269**
28.1 Data Structures . . . 269
28.2 Retrieve Available Attributes of the *ListenerModel* . . . 273
28.3 Get Listeners List . . . 274
28.4 Create a Listener . . . 275
28.5 Get a Listener . . . 275
28.6 Modify a Listener . . . 275
28.7 Delete a Listener . . . 275

29 API v2: Batch Requests **276**
29.1 Data Structures . . . 276

30 Create Batch Operation **277**

31 Create Batch Operation Using Variable **280**
31.1 Atomic Functionality . . . 281

32 API v2: Notification Filter **283**
32.1 Data Structures . . . 283
32.2 Retrieve Available Attributes of the *NotificationFilterModel* . . . 284
32.3 Get Notifications List . . . 285
32.4 Get Notification Filter by ID . . . 285

32.5 Create Notification Filter . . . 286
32.6 Deleting Notification Filter . . . 286

33 API v2: OpenID Connect Configuration 288
33.1 Data Structures . . . 288
33.2 Retrieve Available Attributes of the *OpenIDModel* . . . 289
33.3 Get Existing OpenID Connect Configurations List . . . 289
33.4 Get Existing OpenID Connect Configuration by ID . . . 290
33.5 Defining OpenID Connect Configuration . . . 290
33.6 Modify OpenID Connect Configuration . . . 291
33.7 Deleting OpenID Connect Configuration . . . 291

34 API v2: OpenID Connect Users Assignment 293
34.1 Data Structures . . . 293
34.2 Retrieve Available Attributes of the *UserOpenIDModel* . . . 294
34.3 Get the List of Existing OpenID Connect Configuration Assignments to Users . . . 294
34.4 Get Existing OpenID Connect Configuration Assigned to User . . . 295
34.5 Defining OpenID Connect Configuration Assignment to User . . . 295
34.6 Modify OpenID Connect Configuration Assignment to User . . . 296
34.7 Deleting OpenID Connect Configuration Assignment to User . . . 296

35 API v2: External Password Repository 298
35.1 Data Structures . . . 298
35.2 Retrieve Available Attributes of the *PassvnModel* . . . 299
35.3 Create External Password Repository . . . 299
35.4 Get External Password Repositories List . . . 300
35.5 Get Information About External Password Repository by ID . . . 300
35.6 Delete an External Password Repository Definition . . . 301
35.7 Changing External Password Repository Configuration . . . 301

36 API v2: Backup 302
36.1 Data Structures . . . 302
36.2 Retrieve Available Attributes of the *BackupModel* . . . 303

37 Create Backup Target 304

38 Get Backup Definitions List 305

39 Get a Backup Definition by ID 306

40 Assign Backup Definition to Session 307

41 Delete Backup Definition 308

42 API v2: External Storage NEW 309
42.1 Data Structures . . . 309
42.2 Retrieve Available Attributes of the *ExternalStorageModel* . . . 309
42.3 Get External Storage Information . . . 310
42.4 Get Specific External Storage Device . . . 310
42.5 Configure External Storage . . . 310
42.6 Delete External Storage Configuration . . . 311

43 API v2: Network 312

43.1 Data Structures . . . 312

44 Get Network Settings 313

45 API v2: Upgrade NEW 314
45.1 Data Structures . . . 314
45.2 Retrieve Available Attributes of the *UpgradeModel* . . . 314
45.3 Upload the Upgrade File . . . 315
45.4 Get Uploaded Upgrade Information . . . 315
45.5 Run the Upgrade Check . . . 316
45.6 Cancel the Upgrade Check . . . 316
45.7 Get the Upgrade Check Log . . . 317
45.8 Run the Upgrade . . . 318
45.9 Delete Upgrade . . . 318
45.10 Delete Upgrade Snapshot . . . 319

46 API v2: Hotfix NEW 320
46.1 Upload the Hotfix File . . . 320
46.2 Get Uploaded Hotfix Information . . . 321
46.3 Install the Hotfix . . . 321
46.4 Delete Uploaded Hotfix File . . . 322

47 API v2: License NEW 323
47.1 Data Structures . . . 323
47.2 Retrieve Available Attributes of the *LicenseModel* . . . 324
47.3 Data Structures . . . 324
47.4 Retrieve Available Attributes of the *LicenseUploadModel* . . . 324
47.5 Get License Information . . . 324
47.6 Upload the License . . . 325

48 API v2: IPMI NEW 327
48.1 Data Structures . . . 327
48.2 Retrieve Available Attributes of the *IPMIModel* . . . 327
48.3 Get IPMI Configuration Setup . . . 327
48.4 Get the Status of IPMI . . . 328
48.5 Create IPMI Configuration . . . 328

49 API v2: Healthcheck 330
49.1 Get Healthcheck Status . . . 330

50 API v2: Status 331
50.1 Get Status Information . . . 331

51 API v2: Exporting/Importing System Configuration NEW 333
51.1 Data Structures . . . 333
51.2 Retrieve Available Attributes of the *ConfigurationModel* . . . 333
51.3 Exporting the Master Key . . . 333
51.4 Exporting System Configuration . . . 334
51.5 Importing System Configuration . . . 334

52 API v2: User Directory NEW 336
52.1 API v2: User Directory Configuration **NEW** . . . 336
52.2 API v2: User Directory Controllers **NEW** . . . 341

52.3 API v2: User Directory - Adding Group Mapping **NEW** . . . 346
52.4 API v2: User Directory - Group Mapping - Adding to Groups **NEW** . . . 351
52.5 API v2: User Directory - Group Mapping - Adding to Roles **NEW** . . . 355
52.6 API v2: User Directory - Group Mapping - Assigning External Authentication **NEW** . . . 359
52.7 API v2: User Directory Synchronization Status **NEW** . . . 364

53 API v2: Logs **367**
53.1 Data Structures . . . 367
53.2 Retrieve Available Attributes of the *LogModel* . . . 369
53.3 Get Log List . . . 369

54 API v2: UAG - Current User Identity NEW **370**
54.1 Data Structures . . . 370
54.2 Get Current User Identity . . . 370

55 API v2: UAG - Accounts List NEW **371**
55.1 Get Account List . . . 371

56 API v2: UAG - Account Safe Listener NEW **373**
56.1 Data Structures . . . 373
56.2 Retrieve Available Attributes of the *UagAccountSafeListenerModel* . . . 375
56.3 Get User Access Gateway / Safe / Listener Assignment . . . 375

57 API v2: UAG - Account Access Request NEW **377**
57.1 Data Structures . . . 377
57.2 Retrieve Available Attributes of the *AccessRequestModel* . . . 378
57.3 Get Account Access Requests . . . 378
57.4 Create Account Access Request . . . 379

58 API v2: UAG - Account Remote Applications NEW **380**
58.1 Data Structures . . . 380
58.2 Retrieve Available Attributes of the *AccountRemoteAppModel* . . . 380
58.3 List Remote Applications Assigned to Account . . . 380

59 API v2: UAG - Account Notes NEW **382**
59.1 Data Structures . . . 382
59.2 Retrieve Available Attributes of the *AccountNoteModel* . . . 383
59.3 Get Account Notes . . . 383
59.4 Update Account Note . . . 383

60 API v2: UAG - Account Hotseat Status NEW **385**
60.1 Data Structures . . . 385
60.2 Retrieve Available Attributes of the *AccountHotseatModel* . . . 385
60.3 Request Hotseat Status . . . 386

61 API v2: UAG - Secret Checkout and Checkin NEW **387**
61.1 Data Structures . . . 387
61.2 Retrieve Available Attributes of the *CheckoutModel* . . . 387
61.3 Retrieve Available Attributes of the *CheckinModel* . . . 388
61.4 Checkout Secret . . . 388
61.5 Repeat Checkout in the Same Session . . . 389
61.6 Checkin Secret . . . 390

62 API v2: UAG - Account Password History NEW **391**
62.1 List Password History Entries . . . 391
62.2 Get Specific Historical Secret Value . . . 392

63 API v2: UAG - Change Password NEW **393**
63.1 Data Structures . . . 393
63.2 Retrieve Available Attributes of the *ChangePasswordModel* . . . 393
63.3 Change Password . . . 393

64 API v2: UAG - Change Language NEW **395**
64.1 Data Structures . . . 395
64.2 Retrieve Available Attributes of the *ChangeLanguageModel* . . . 395
64.3 Change Language . . . 395

65 API v2: UAG - OTP Generation NEW **397**
65.1 Data Structures . . . 397
65.2 Retrieve Available Attributes of the *OtpModel* . . . 397
65.3 Generate OTP . . . 398

66 API v2: UAG - Generating RDP Configuration NEW **399**
66.1 Data Structures . . . 399
66.2 Retrieve Available Attributes of the *RdpConfigModel* . . . 399
66.3 Generate RDP Configuration . . . 399

67 API v2: UAG - Session Timeout Check NEW **401**
67.1 Get Session Timeout . . . 401

CHAPTER

ONE

ABOUT DOCUMENTATION

Documentation Structure

This API documentation consists of:

- *API Overview* section providing an overview of key concepts that clarify important topics, such as API purpose, nomenclature, request format, methods, possible responses, endpoints and objects specification, parameters and attribute's properties.
- Sections describing endpoints related to individual objects and Fudo Enterprise functionalities.

Conventions and symbols

This documentation is written using the following conventions:

- *italic* - this formatting is used to mark user interface elements.
- `example` - this formatting is used to write example value of a parameter, API method name or code example.
- Note field:

> **Note**
>
> Note field usually contains additional information closely related with described topic, e.g. suggestion concerning given procedure step; additional conditions which have to be met.

- Warning field:

> **Warning**
>
> Warning field usually contains essential information concerning system's operation. Not adhering to this information may have irreversible consequences.

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CHAPTER

TWO

API OVERVIEW

The purpose of Fudo Enterprise Application Programming Interface (API) is to provide users and administrators with the ability to speed up and automate time-consuming tasks related to remote access management. This API can be used to retrieve data about objects, manage large numbers of objects or integrate Fudo Enterprise with external systems.

Note

You may still come across references to **APIv1** in some materials. This older version has been fully retired starting from Fudo Enterprise 5.6. The current interface is called **APIv2** to distinguish it from the legacy version that was in use earlier.

2.1 API Purpose

Fudo API provides a wide range of functionality for administrators, including:

- Retrieving data from and about Fudo objects, like users, servers, accounts, safes, listeners, etc.
- Searching and filtering objects.
- Adding, editing and deleting large numbers of objects and their attributes.
- Automatization of time-consuming admin tasks related to managing objects.
- Integration with external systems.

2.2 API Nomenclature

For a better understanding of our API, please refer to the terminology we have adopted:

- **object** - the main elements of the API, on which endpoints operate. For example, user, account, listener, server, etc.
- **attribute** - a feature of the object. For example, the attributes of the object `account` include `id`, `name`, `description`, etc.
- **property** - an attribute property in the object specification. For example, the attribute `name` properties of the `account` object are: `type`, `required`, `ignore_case` and `unique`.

Pattern example:

```
"object": {
        "attribute": {
            "property0": "value",
            "property1": "value",
            "property2": "value",
            "property3": "value",
        },
}
```

Partial code example:

```
"account": {
          "id": {
              "type": "string",
              "readonly": true,
              "grant": "account",
              "unique": true
          },
          "name": {
              "type": "string",
              "required": true,
              "ignore-case": true,
              "unique": true
          },
          "description": {
              "type": "string"
          }
}
```

2.3 Request Format

Note

You may still come across references to **APIv1** in some materials. This older version has been fully retired starting from Fudo Enterprise 5.6. The current interface is called **APIv2** to distinguish it from the legacy version that was in use earlier.

APIv2 request format:

<method> http://<fudo_address>/api/v2/<endpoint>[?<params>] <body>

Where:

- <method> - is HTTP method (GET, POST, PATCH or DELETE only allowed),
- <fudo address> - is Fudo Enterprise IP address (e.g., `10.0.0.0`),
- <endpoint> - is chosen endpoint (e.g., `/objspec/user`),
- <params> - is URL parameters available for a specific method (e.g., `filter`, `offset`, `limit`),

- <body> - is request body in JSON format.

An example of the request that returns a list of available users (with no parameters specified and no body needed):

GET /api/v2/user

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/user' \
```

An example of the request that creates user with *user* role and *test-user* name:

POST /api/v2/user

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
      -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/user' \
  -d '{
        "role": "user",
        "name": "test-user"
  }'
```

2.4 Methods

Please find below list of allowed methods while using this API.

`GET`	For reading data of an existing object. No request body is allowed.
`POST`	For creating an object. Requires a request body, specified in JSON format, that contains the values for properties of the object that is about to be created. The exception is `/session/<session_id>/backup/<backup_id>` endpoint, which does not require a body.
`PATCH`	For modifying an existing object. Requires a request body, specified in JSON format, that contains the values for properties of the object.
`DELETE`	For removing an existing object. No request body is allowed.

2.5 Possible Responses

Please find below list of possible responses to API queries.

Code	Status	Description
200	success	`OK`
201	success	`CREATED`
400	failure	`BAD REQUEST;` message examples: • `Unrecognized endpoint` • `Request body is not allowed for this endpoint`
401	failure	`UNAUTHORIZED;` message example: • `Unauthorized request` • `Missing session key` • `Missing %s header` • `Referer mismatch` • `Unable to find the user` • `User is blocked`
403	failure	`FORBIDDEN;` message example: `Permission denied`
404	failure	`NOT FOUND;` message example: `Object not found`
500	failure	`INTERNAL SERVER ERROR;` message example: `Database error`
503	failure	`SERVICE UNAVAILABLE;` message example: `Fudo is unhealthy`

2.6 Endpoints and Objects Specification

To better understand Fudo Enterprise API functionality, we can group endpoints according to object types defined in Fudo Enterprise data model.

Object type	Endpoints example
user	• /user • /user/<id> • /user/safe/time_policy • /user/safe • ...

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Table 1 – continued from previous page

Object type	Endpoints example
server	• /server • /server/<id> • ...
account	• /account • /account/<id> • /account/safe/listener • ...
safe	• /safe • /safe/<id> • /grant/safe • ...
listener	• /listener • /listener/<id> • /grant/listener • ...

We can also distinguish additional types of endpoint groups corresponding to the objects listed below:

- pool
- external_authentication
- session
- remote_app

...and also groups of functional methods, like:

- objspec
- grant
- batch
- network

Let's take a closer look at the last four types in the following paragraphs.

Objspec

The `objspec` type, used only with the `GET` method, enables administrators to retrieve specifications of objects on which endpoints operate, e.g.:

- `/objspec/user` request will return attributes of *user* object type,
- `/objspec/remote_app` request will return attributes of *remote_ app* object type.

Below you can find an example of information returned for `GET https://10.0.0.0/api/v2/objspec/remote_app` request.


```
{
    "result": "success",
    "remote_app": {
        "id": {
            "type": "string",
            "readonly": true,
            "unique": true
        },
        "name": {
            "type": "string",
            "required": true,
            "ignore_case": true,
            "unique": true
        },
        "path": {
            "type": "string",
            "required": true
        },
        "arguments": {
            "type": "string"
        },
        "created_at": {
            "type": "string",
            "readonly": true
        },
        "modified_at": {
            "type": "string",
            "readonly": true
        },
        "removed": {
            "type": "boolean",
            "readonly": true
        }
    }
}
```


As you can see on the above example, `remote_app` possess following attributes: `id, name, path, arguments, created_at, modified_at` and `removed`.

Batch

Fudo API's `batch` powerfull functionality enables administrators to send batch requests, allowing them to perform nested operations with different methods. Please refere to section *API v2: Batch requests*.

Grant

This group, used with the `GET`, `POST` and `DELETE` methods, allows granting management privileges for users to selected accounts, pools, other users, listeners, safes, or servers.

Network

The *Network* functionality allows to retrieve network settings such as DNS address(es), Admin Panel's address, Access Gateway's address, global configuration parameters, network interfaces configuration or routing configuration. It is used only with the `GET` method. To learn more, please refer to *API v2: Network* section.

2.7 Parameters

You can add a query string just after the endpoint, preceded by a question mark. This provides a string of information that will specify special parameters for your query. In this chapter, you will find a description of the **URL parameters** available for specific methods to be included within a path.

Fields

This parameter is used to specify only desired object fields in the query. `Null` values are skipped, unless explicitly requested.

If query has no `fields` parameter specified:

- `GET` method will return all attributes of an object except those set to `Null`,
- `POST` method will show only `id` fields,
- `PATCH` method will not return any fields.

When using `fields` parameter with no value (`fields=`):

- `GET` method will return `id` field only,
- `POST` and `PATCH` will not return any fields.

Duplicated fields are ignored, e.g., `fields=id,name,name,protocol` will be treated like `fields=id,name,protocol`.

The example below utilizes the `fields` and `filter` parameters to narrow down the result to servers that include the string `test` in the `name` field, returning only the `id`, `name` and `protocol` fields in the response:

Example Request

```
GET https://10.0.0.0/api/v2/server?\
    fields=id,name,protocol&\
    filter=name.match(test)
```

Filter

> **Note**
>
> Please note that certain filters are applied automatically depending on the user's role.

This parameter narrows out the result with available additions:

- `.in()` - include possible attribute values,
- `.iin()` - case insensitive version of `.in()`,
- `.contains()` - include possible fields containing specified values, only applies to arrays (e.g., `account?filter=server_ids.contains(345)`),

Note

- When using `.in()`, `.iin()`, and `.contains()`, we can input multiple values with a comma as a separator (e.g., `server?filter=protocol.in(ssh,rdp,vnc)`, `account?filter=server_ids.contains(1,2,3)`). In this situation, at least one of the given conditions must be met.
- We can also use multiple conditions separated with comma (e.g., `server?filter=server_ids.contains(1),server_ids.contains(2)`). In such cases, all given conditions must be met. This rule applies to all parameters.

- `.match()` - include a regular expression to be searched in field values,
- `.imatch()` - case insensitive version of `.match()`,
- `.eq()` - equal (`name.eq(foo)`),
- `.ieq()` - case insensitive version of `.eq()`,
- `.ne()` - not equal,
- `.ine()` - case insensitive version of `.ne()`,
- `.lt()` - less than,
- `.le()` - less or equal,
- `.gt()` - greater than,
- `.ge()` - greater than or equal,
- `<attribute>` - filter objects based on attributes of type `boolean` set to `true`,
- `!<attribute>` - filter objects based on attributes of type `boolean` set to `false`,

Note

The example filter `filter=protocol.eq(ssh),!legacy_crypto,tls_enabled` filters out objects with the `protocol` equal to `ssh`, boolean type attribute `legacy_crypto` set to `false` and boolean type attribute `tls_enabled` set to `true`.

- `.isnull()` - filter objects with empty values in specified fields (e.g., `description.isnull()`),
- `.isempty()` - filter objects with empty values in specified fields, only applies to arrays.

Note

Every filter can be negated with <!>. For instance, the query `filter=!protocol.eq(ssh)` will skip all objects with the protocol attribute set to `ssh`. This example is equivalent of `protocol.ne(ssh)`.

Note

While using `DELETE` method:

- negation <!> cannot be used,
- for safety reasons, at least one unique filter value must be used in the query (e.g., `id`, `name`),
- if an object does not have a unique attribute, uniqueness is determined based on a set of attributes (e.g., `filter=account_id.eq(123456),safe_id.eq(345567), listener_id.eq(789012)`).

Search in "all" attributes

The special attribute `all.` enables searching for a specified value in all attributes of type `number` and `string`.

Note

Only `.match()` and `.imatch()` methods can be used on this special attribute.

The example below searches for the string `rdp` in all eligible attributes of the `server` objects. As a result, it will return all servers that have the string `rdp` included in fields such as `name`, `protocol`, `description`, or `reason`.

Example Request

```
GET https://10.0.0.0/api/v2/server?\
filter=all.imatch(rdp)
```

Order

This parameter specifies the order of returned data.

Note

You can reverse the order with an exclamation mark <!>.

Example below will return all servers `id`, `name` and `protocol` fields, sorted first by `protocol`, and next by reverse `id` order:

Example Request

```
GET https://10.0.0.0/api/v2/server?\
    fields=id,name,protocol&\
    order=protocol,!id
```

Response


```
{
     "result": "success",
     "server": [
         {
             "id": "918734323983581188",
             "name": "RDP_server_2",
             "protocol": "rdp"
         },
         {
             "id": "918734323983581187",
             "name": "RDP_server",
             "protocol": "rdp"
         },
         {
             "id": "918734323983581186",
             "name": "windows.example.org",
             "protocol": "rdp"
         },
         {
             "id": "918734323983581189",
             "name": "SSH_server",
             "protocol": "ssh"
         },
         {
             "id": "918734323983581185",
             "name": "linux.example.org",
             "protocol": "ssh"
         }
     ]
 }
```


Offset

This parameter is used to exclude from a response the first N items of a resource collection. Example below skips first 5 objects on the query response:

Example Request

```
GET https://10.0.0.0/api/v2/user?\
    offset=5
```

For predictable results, use this parameter in conjunction with `order` parameter.

Limit

This query parameter specifies the number of instances that a single response contains. Example below limits the list of returned objects to 10 (by ID order):

Example Request

```
GET https://10.0.0.0/api/v2/user?\
    fields=id,name&order=id&\
    filter=role.eq(user)&\
    limit=10
```

Note

- If the limit is not specified in a query, the API will automatically return 1000 records by default.
- Setting the limit value above 1000 results in a Bad Request error.

Debug

This parameter is used to diagnose a query. Example below returns query with debugging data:

Example Request

```
GET https://10.0.0.0/api/v2/server?\
    fields=id,name,protocol&\
    order=protocol,!id&\
    debug
```

Response

```
{
    "result": "success",
    "server": [
        {
            "id": "918734323983581188",
            "name": "RDP_server_2",
            "protocol": "rdp"
        },
        {
            "id": "918734323983581187",
            "name": "RDP_server",
            "protocol": "rdp"
        },
        {
            "id": "918734323983581186",
            "name": "windows.example.org",
            "protocol": "rdp"
        },
        {
            "id": "918734323983581189",
            "name": "SSH_server",
            "protocol": "ssh"
        },
        {
```

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```
            "id": "918734323983581185",
            "name": "linux.example.org",
            "protocol": "ssh"
        }
    ],
    "debug": {
        "timings": {
            "total start": null,
            "receive start": null,
            "receive duration": "0.000142s",
            "endpoint_verify start": null,
            "endpoint_verify duration": "0.000003s",
            "endpoint_execute start": null,
            "database_request (SELECT) start": null,
            "database_request (SELECT) duration": "0.001976s",
            "endpoint_execute duration": "0.002087s",
            "total duration": "0.008025s"
        }
    }
}
```


Total Count

`total_count` parameter returns the total number of objects, taking into account the filters applied in the query, but at the same time ignoring `limit` and `offset` parameters. In the case of large amounts of objects it can be expensive to use.

Estimated Total Count

`estimated_total_count` parameter can be inaccurate, so it is useful just to estimate quantities. It is much less expensive to use than `total_count`, includes deleted and hidden objects, ignores `filter` parameters and is only available for *superadmin* role.

Reveal

This parameter enables to view objects with the following states:

- `active`,
- `removed`,
- `visible`,
- `hidden`,
- `all`.

By default `reveal` is set to `active` and `visible` states (`?reveal=active,visible`). If we do not specify it as `active` or `removed` (e.g., `?reveal=visible`) it will return only `active` objects.

The same situation occurs in the case of `visible` and `hidden` pair of parameters. If we do not specify `reveal` as `visible` or `hidden`, it will by default take the `visible` value and return only `visible` objects.

2.8 Attribute's Properties

We can distinguish the following features of attributes used in object specification:

Table 2: `Attribute's properties`

Property	Possible values	Default value	Description
type	• `boolean` • `number` • `string` • `number-a` • `string-a`	`string`	Attribute's type in JSON requests.
readonly	• `true` • `false`	`false`	When set to `true`, it cannot be set during POST or modified during PATCH.
immutable	• `true` • `false`	`false`	When set to `true`, it can be set only during POST, but cannot be modified during PATCH.
ignore-case	• `true` • `false`	`false`	When set to `true`, `apid` will ignore letters case when filtering by this attribute.
allow-empty	• `true` • `false`	`false`	When set to `true`, this string attribute can be set to an empty string.
default	`<value>`	No default	Attribute's default value.
protected	• `true` • `false`	`false`	The attribute's value is a secret and shouldn't be returned to the caller.
grant	`<objtype>`	No default	Require grant on `<objtype>` and use this attribute as an ID for the `<objtype>` object.
required	• `true` • `false`	`false`	When set to `true`, the attribute is always required.
required-by	`{ <attribute>: <value>, ... }`	No default	• List of attributes and their values that require this attribute. • If the value is an empty object then this attribute is required whenever the given attribute exists. • Multiple `''required-by''` properties can be specified.

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Table 2 – continued from previous page

Property	Possible values	Default value	Description
requires	`{ <attribute>: <value>, ... }`	No default	• List of attributes and their values required by this attribute. • If the value is an empty object then the given attribute is required, but value doesn't matter. • Multiple `''requires''` properties can be specified. If that is the case then at least one of them has to be met.
values	• `<value>` or: • `[ <value>, ... ]`	No default	Value or an array of possible values for this attribute.
value-labels	`[ <label>, ... ]`	No default	User-friendly names for all the values, used in graphical user interfaces.
value-range	`[ <minval>, <maxval> ]`	No default	Value range for a numeric attribute.
value-regexp	`<regular expression>`	No default	Regular expression that the value has to match.
unique	• `true` • `false` or: • `<attribu` or: • `[ <attribu ... ]`	`false`	The given attribute is unique by itself (when `true`) or is unique when combined with other attributes.
expensive	• `true` • `false`	`false`	The given attribute is expensive to retrieve because it requires an additional operations in the database or a subquery.
description	`string`	No default	Short description of the attribute.

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Table 2 – continued from previous page

Property	Possible values	Default value	Description
capability	`{ objtype: <string>, <HTTP method>: <right>, ... }`	None	Defines role-based access requirements (RBAC) for accessing or modifying the object via a specific API method. The object type (objtype) specifies the protected resource (e.g. account), while each HTTP method (e.g. GET, POST, PATCH, DELETE) maps to a required right (e.g. read, write). For example, GET: read on account means that to retrieve object via GET, the user must have the read right on the account object type.

2.8.1 Selected Use Examples

Required-by

Description

In the following example, the attribute is required when `protocol` is set to either `ssh` or `rdp`.

Example

```
"required-by": { "protocol": [ "ssh", "rdp" ] }
```

Description

Example below shows that when `"external_port"` is defined, this attribute is required.

Example

```
"required-by": { "external_port": { } }
```

Description

Multiple `"required-by"` properties can be specified. Two equivalent examples below shows that this attribute is required either:

- when `protocol` is `"ssh"` or
- when `protocol` is `http` or `rdp` and `tls_enabled` is `true`.

Example

```
"required-by": { "protocol": "ssh" },
"required-by": { "protocol": [ "http", "rdp" ], "tls_enabled": true }
```

Equivalent example

```
"required-by": { "protocol": "ssh" },
"required-by": { "protocol": "http", "tls_enabled": true },
"required-by": { "protocol": "rdp", "tls_enabled": true }
```

Requires

Description

Following example shows that this attribute requires `protocol` to be set to `ssh` or `rdp`.

Example

```
"requires": { "protocol": [ "ssh", "rdp" ] }
```

Description

Following example shows that `"external_port"` is required to exist, but its value is not important.

Example

```
"requires": { "external_port": { } }
```

Description

Following example shows that this attribute requires `protocol` to be set to `rdp` and `"tls_enabled"` to be set to `true`.

Example

```
"requires": { "protocol": "rdp", "tls_enabled": true }
```

Unique

Description

Example of unique attribute with no dependencies.

Example

```
"id": {"unique": true}
```

Description

Example of unique attribute with single dependency - a pair of those attributes is unique.

Example

```
"safe_id": {
        "unique": "user_id"
},
"user_id": {
        "unique": "safe_id"
}
```

Description

Example of unique attribute with double dependency - three attributes together are unique.

Example

```
"account_id": {
        "unique": [ "listener_id", "safe_id" ]
},
"listener_id": {
        "unique": [ "account_id", "safe_id" ]
```

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```
},
"safe_id": {
        "unique": [ "account_id", "listener_id" ]
}
```

2.9 API BETA Endpoints

Endpoints in the `/beta` and `/internal` namespace are subject to change without notice. These endpoints are considered experimental and may undergo modifications, deprecations, or removals as we continue to refine and improve the API.

It is recommended to use these endpoints with caution and not to rely on them for production-level applications. Always check for updates and changes regularly when using `/beta` or `/internal` endpoints.

> **Note**
>
> For production environments, it is advisable to use the stable endpoints. The `/beta` and `/internal` endpoints are intended for testing and development purposes only.

CHAPTER

THREE

API V2: AUTHENTICATION

To access Fudo Enterprise data structures via the API interface, you need a *user* object defined in the local database with the *API Key* authentication method specified. To obtain the *API Key*, please follow below steps in the Fudo Enterprise Admin Panel:

- Create new *user* or edit existing *admin* user definition.
- Specify the *API Key* authentication method for this *user*.
- Generate the *API Key* value, copy it, and archive it for future API requests.

Note

The API Key cannot be retrieved after saving this authentication method.

For more detailed information, please refer to the Users section of the Fudo Enterprise Documentation.

3.1 How To Authenticate Using an API Key

For successful authentication, include the key `Authorization` with the generated *API Key* value in the *Headers* of your API requests.

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.31.87.227/api/v2/user'
```

3.2 Access Rights Restrictions

The same access rights restrictions apply to the API interface as in case of Administration Panel access. Outlined in the table below are the access rights specified for each of the roles available in Fudo Enterprise.

CHAPTER

FOUR

API V2: ROLE-BASED ACCESS CONTROL AND USER GROUPS NEW

Roles implement Role-Based Access Control (RBAC), providing granular and flexible control over user permissions.

The **RBAC (Role-Based Access Control)** functionality in Fudo Enterprise allows system administrators to define precise roles with specific access permissions tailored to objects and operations. This enables the creation of roles designed for particular tasks, such as a role that grants permissions solely for user management—allowing the creation, editing, and deletion of users—without affecting other areas of the system.

4.1 API v2: Definitions NEW

Privilege A permission to perform a specific action in the system. It may apply to all objects of a given type (e.g., modifying password changers, creating servers) or be unrelated to any object (e.g., upgrading Fudo).

Capability Access granted to a subject for a specific object. A capability defines on which object the assigned privileges can be used.

Right A specific permission within a capability — it defines what operations can be performed on the assigned object (e.g., the ability to block a user specified by the capability).

Subject The entity that holds permissions — either a user or a group.

Object The target of the permissions. Currently supported object types are: user, safe, account, pool, group, and server.

4.2 API v2: Privileges NEW

4.2.1 Data Structures

Table 1: `PrivilegeModel`

Attribute	Type	Required	Description
`name`	string	yes	Unique; Read-only.
`description`	string	yes	Read-only.

4.2.2 Retrieve Available Attributes of the *PrivilegeModel*

Request

Method	`GET`
Path	`/api/v2/objspec/privilege`

GET /api/v2/objspec/privilege

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/objspec/privilege'
```

4.2.3 Get List of Available Privileges

Request

Method	`GET`
Path	`/api/v2/privilege`

GET /api/v2/privilege

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/privilege'
```

Response

```
{
    "result": "success",
    "privilege": [
        {
            "name": "account-create",
            "description": ""
        },
        {
            "name": "account-read",
            "description": ""
        },
        {
            "name": "account-modify",
            "description": ""
        },
        {
            "name": "account-delete",
            "description": ""
        },
```

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```
        {
            "name": "account-block",
            "description": ""
        },
        {
            "name": "group-create",
            "description": ""
        },
        {
            "name": "webapp-session-timeout",
            "description": "Fudo Admin Panel and User Access Gateway session␣
↪timeout configuration"
        }
        // ... more privileges
    ]
}
```

4.3 API v2: Roles NEW

4.3.1 Data Structures

Table 2: `RoleModel`

Attribute	Type	Required	Description
`id`	string		Read-only. Unique identifier.
`name`	string	yes	Case-insensitive. Unique.
`description`	string		
`privs`	string-array	yes	Read-write; Expensive to use.
`created_at`	datetime		Read-only. Timestamp of creation.
`modified_at`	datetime		Read-only. Timestamp of modification.
`removed`	boolean		Read-only.
`builtin`	boolean		Read-only; Expensive to use; If `true`, the object is not editable.
`hidden`	boolean		Read-only; Expensive to use; If `true`, the object is hidden in UI.

4.3.2 Retrieve Available Attributes of the *RoleModel*

Request

Method	`GET`
Path	`/api/v2/objspec/role`

GET /api/v2/objspec/role

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/objspec/role'
```

4.3.3 Get Roles List

Request

Method	GET
Path	/api/v2/role

GET /api/v2/role

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/role'
```

Response

```
{
    "result": "success",
    "role": [
        {
            "id": "9115285645797883905",
            "name": "superadmin",
            "privs": [
                "account-create",
                "account-read",
                "account-modify",
                "..."
            ],
            "created_at": "2025-04-25 01:40:11.204397-07",
            "modified_at": "2025-04-25 01:40:11.204397-07",
            "builtin": false,
            "hidden": false
        },
        {
            "id": "9115285645797883910",
            "name": "viewer",
            "privs": [
                "user-session-view",
                "dashboard"
            ],
            "created_at": "2025-04-25 01:40:11.20449-07",
            "modified_at": "2025-04-25 01:40:11.20449-07",
            "builtin": false,
            "hidden": false
        }
```

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```
    ]
}
```

4.3.4 Get Role by ID

Request

Method	`GET`
Path	`/api/v2/role/<id>`

GET /api/v2/role/<id>

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/role/9115285645797883910'
```

Response

```
{
    "result": "success",
    "role": {
        "id": "9115285645797883910",
        "name": "viewer",
        "privs": [
            "user-session-view",
            "dashboard"
        ],
        "created_at": "2025-04-25 01:40:11.20449-07",
        "modified_at": "2025-04-25 01:40:11.20449-07",
        "builtin": false,
        "hidden": false
    }
}
```

4.3.5 Create Role

Request

Method	`POST`
Path	`/api/v2/role`
Headers	`Content-Type: application/json`
Body	`RoleModel`

POST /api/v2/role

Example Request

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/role' \
  -d'{"name": "Role_Session_Viewer","privs": ["user-session-view","dashboard"]}'
```

Response

```
{
    "result": "success",
    "role": {
        "id": "9115285645797883911"
    }
}
```

4.3.6 Modify Role

Request

Method	PATCH
Path	/api/v2/role/<id>
Headers	Content-Type: application/json
Body	RoleModel

PATCH /api/v2/role/<id>

Example Request

```
curl -s -k -X PATCH \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.31.87.227/api/v2/role/9115285645797883911' \
  -d'{"name": "Role_Session_Manager","privs": ["session-read","session-modify",
↪"session-delete","session-encode","session-file-read","session-file-download",
↪"session-file-delete","session-movie-read","session-movie-download","session-
↪share-view","session-share-join","session-comment-read","session-comment-write
↪","session-terminate","session-export"]}'
```

Response

```
{
    "result": "success"
}
```

4.3.7 Grant Privileges to Role

Request

Method	PATCH
Path	/api/v2/role/<id>/grant
Headers	Content-Type: application/json
Body	RoleModel

PATCH /api/v2/role/<id>/grant

Example Request

```
curl -s -k -X PATCH \
  -H 'Authorization: proxycrypto' \
  -H 'Content-Type: application/json' \
  'https://10.31.87.227/api/v2/role/9115285645797883912/grant' \
  -d'{"privs": ["session-read","session-modify"]}'
```

Response

```
{
    "result": "success"
}
```

4.3.8 Revoke Privileges from Role

Request

Method	PATCH
Path	/api/v2/role/<id>/revoke
Headers	Content-Type: application/json
Body	RoleModel

PATCH /api/v2/role/<id>/revoke

Example Request

```
curl -s -k -X PATCH \
  -H 'Authorization: proxycrypto' \
  -H 'Content-Type: application/json' \
  'https://10.31.87.227/api/v2/role/9115285645797883912/revoke' \
  -d'{"privs": ["session-read","session-modify"]}'
```

Response

```
{
    "result": "success"
}
```

4.3.9 Delete Role

Request

Method	`DELETE`
Path	`/api/v2/role/<id>`

DELETE /api/v2/role/<id>

Example Request

```
curl -s -k -X DELETE \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.31.87.227/api/v2/role/9115285645797883911'
```

Response

```
{
    "result": "success"
}
```

4.4 API v2: User-Role Assignment NEW

4.4.1 Data Structures

Table 3: `UserRoleModel`

Attribute	Type	Required	Description
`id`	string		Read-only. Unique identifier. Protected.
`user_id`	string	yes	Immutable. Uniqueness is required in the combination of attribute `user_id` with attribute `role_id`. Requires `read` right on the `user` object for GET requests.
`role_id`	string	yes	Immutable. Uniqueness is required in the combination of attribute `role_id` with attribute `user_id`.
`role_name`	string		Read-only; Expensive to use.
`user_name`	string		Read-only; Expensive to use.
`privs`	string-array	yes	Read-only; Expensive to use.
`created_at`	datetime		Read-only. Timestamp of creation.
`modified_at`	datetime		Read-only. Timestamp of modification.
`removed`	boolean		Read-only.
`builtin`	boolean		Read-only; Expensive to use; If `true`, the object is not editable.
`hidden`	boolean		Read-only; Expensive to use; If `true`, the object is hidden in UI.

4.4.2 Retrieve Available Attributes of the *UserRoleModel*

Request

Method	`GET`
Path	`/api/v2/objspec/user_role`

GET /api/v2/objspec/user_role

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/objspec/user_role'
```

4.4.3 Get User-Role Assignment List

Request

Method	`GET`
Path	`/api/v2/user/role`

GET /api/v2/user/role

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/user/role'
```

Response

```
{
  "result": "success",
  "user_role": [
    {
      "user_id": "9115285645797883905",
      "role_id": "9115285645797883905",
      "role_name": "superadmin",
      "user_name": "admin",
      "privs": [
        "account-create",
        "account-read",
        "account-modify",
        "..."
      ],
      "created_at": "2025-04-25 01:40:11.204397-07",
      "modified_at": "2025-04-25 01:40:11.204397-07",
      "builtin": false,
      "hidden": false
    },
```

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```
    {
      "user_id": "9115285645797883908",
      "role_id": "9115285645797883908",
      "role_name": "operator",
      "user_name": "remoteapp",
      "privs": [
        "user-session-view",
        "listener-read",
        "notification-filter-create",
        "notification-filter-read",
        "..."
      ],
      "created_at": "2025-05-07 05:17:40.584837-07",
      "modified_at": "2025-05-07 05:17:40.584837-07",
      "builtin": false,
      "hidden": false
    }
  ]
}
```

4.4.4 Get Role Assigned to a User by Their IDs

Request

Method	GET
Path	/user/<user_id>/role/<role_id>

GET /api/v2/user/<user_id>/role/<role_id>

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/user/9115285645797883905/role/9115285645797883905'
```

Response

```
{
    "result": "success",
    "user_role": {
        "user_id": "9115285645797883905",
        "role_id": "9115285645797883905",
        "role_name": "superadmin",
        "user_name": "admin",
        "privs": [
            "account-create",
            "account-read",
            "account-modify",
            "account-delete",
```

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```
                        "..."
        ],
        "created_at": "2025-04-25 01:40:11.206421-07",
        "modified_at": "2025-04-25 01:40:11.206421-07",
        "builtin": false,
        "hidden": false
    }
}
```

4.4.5 Create User-Role Assignment

Request

Method	POST
Path	/api/v2/user/role
Headers	Content-Type: Application/json
Body	UserRoleModel

POST /api/v2/user/role

Example Request

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
      -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/user/role' \
      -d'{"user_id":"9115285645797883905","role_id":"9115285645797883908"}'
```

Response

```
{
    "result": "success"
}
```

4.4.6 Delete User-Role Assignment

Request

Method	DELETE
Path	/api/v2/user/<user_id>/role/<role_id>

DELETE /api/v2/user/<user_id>/role/<role_id>

Example Request

```
curl -s -k -X DELETE \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.31.87.227/api/v2/user/9115285645797883905/role/9115285645797883908
↪'
```

Response

```
{
    "result": "success"
}
```

4.5 API v2: Groups NEW

Endpoints in this section allow you to create groups and modify their name and description. To assign safes, users, and configure object permissions, refer to the following sections: *API v2: Group-Safe Assignment* ***NEW***, *API v2: Group-Safe-TimePolicy Management* ***NEW***, and *API v2: Group-User Assignment* ***NEW***.

4.5.1 Data Structures

Table 4: `GroupModel`

Attribute	Type	Required	Description
`id`	string		Read-only. Unique identifier. Requires rights to perform operations on the `group` object: `read` for GET, `modify` for PATCH, `delete` for DELETE.
`name`	string	yes	Case-insensitive. Unique.
`description`	string		
`rights`	string-array		Read-only; List of rights the subject has to this object.
`created_at`	datetime		Read-only. Timestamp of creation.
`modified_at`	datetime		Read-only. Timestamp of modification.
`removed`	boolean		Read-only.

4.5.2 Retrieve Available Attributes of the *GroupModel*

Request

Method	`GET`
Path	`/api/v2/objspec/group`

GET /api/v2/objspec/group

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/objspec/group'
```

4.5.3 Get Groups List

Request

Method	GET
Path	/api/v2/group

GET /api/v2/group

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/group'
```

Response


```
{
    "result": "success",
    "group": [
        {
            "id": "9115285645797883905",
            "name": "admin",
            "rights": [
                "read",
                "modify",
                "delete",
                "user-add",
                "user-remove"
            ],
            "created_at": "2025-04-28 03:59:56.247996-07",
            "modified_at": "2025-04-28 03:59:56.247996-07"
        },
        {
            "id": "9115285645797883906",
            "name": "QA_team",
            "rights": [
                "read",
                "modify",
                "delete",
                "user-add",
                "user-remove"
            ],
            "created_at": "2025-04-30 02:18:18.651517-07",
            "modified_at": "2025-04-30 02:18:18.651517-07"
        }
    ]
}
```

4.5.4 Get Group by ID

Request

Method	GET
Path	/api/v2/group/<id>

GET /api/v2/group/<id>

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/group/9115285645797883905'
```

Response

```
{
    "result": "success",
    "group": {
        "id": "9115285645797883905",
        "name": "admin",
        "rights": [
            "read",
            "modify",
            "delete",
            "user-add",
            "user-remove"
        ],
        "created_at": "2025-04-28 03:59:56.247996-07",
        "modified_at": "2025-05-07 23:55:40.907653-07"
    }
}
```

4.5.5 Create Group

Request

Method	POST
Path	/api/v2/group
Headers	Content-Type: Application/json
Body	GroupModel

POST /api/v2/group

Example Request

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
```

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```
  'https://10.0.214.98/api/v2/group' \
  -d'{"name": "QA_Team",``description``: "Members of QA responsible for..."}'
```

Response

```
{
    "result": "success",
    "group": {
        "id": "9115285645797883908"
    }
}
```

4.5.6 Modify Group

Request

Method	`PATCH`
Path	`/api/v2/group/<id>`
Headers	`Content-Type: Application/json`
Body	`GroupModel`

PATCH /api/v2/group/<id>

Example Request

```
curl -s -k -X PATCH \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.31.87.227/api/v2/group/9115285645797883911' \
  -d'{"name": "Dev_Team","description": "Members of DEV responsible for..."}'
```

Response

```
{
    "result": "success"
}
```

4.5.7 Delete Group

Request

Method	`DELETE`
Path	`/api/v2/group/<id>`

DELETE /api/v2/group/<id>

Example Request

```
curl -s -k -X DELETE \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.31.87.227/api/v2/group/9115285645797883911'
```

Response

```
{
    "result": "success"
}
```

4.6 API v2: Group-Safe Assignment NEW

Endpoints in this section allow you to assign safes to groups.

4.6.1 Data Structures

Table 5: `GroupSafeModel`

Attribute	Type	Required	Description
`id`	string		Read-only. Unique identifier. Protected.
`group_id`	string	yes	Immutable. Uniqueness is required in the combination of attribute `group_id` with attribute `safe_id`. Requires rights to perform operations on the `group` object: `read` for GET, `modify` for POST, PATCH, and DELETE.
`safe_id`	string	yes	Immutable. Uniqueness is required in the combination of attribute `safe_id` with attribute `group_id`. Requires rights to perform operations on the `safe` object: `read` for GET and PATCH, `group-add` for POST, `group-remove` for DELETE.
`password_visib`	boolean; default value `false`	yes	
`use_time_polic`	boolean; default value `false`	yes	
`group_name`	string		Read-only; Expensive to use.
`safe_name`	string		Read-only; Expensive to use.
`created_at`	datetime		Read-only. Timestamp of creation.
`modified_at`	datetime		Read-only. Timestamp of modification.
`removed`	boolean		Read-only.
`builtin`	boolean		Read-only; Expensive to use; If `true`, the object is not editable.
`hidden`	boolean		Read-only; Expensive to use; If `true`, the object is hidden in UI.

4.6.2 Retrieve Available Attributes of the *GroupSafeModel*

Request

Method	GET
Path	/api/v2/objspec/group_safe

GET /api/v2/objspec/group_safe

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.31.87.227/api/v2/objspec/group_safe'
```

4.6.3 Get Group-Safe Assignment List

Request

Method	GET
Path	/api/v2/group/safe

GET /api/v2/group/safe

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/group/safe'
```

Response

```
{
    "result": "success",
    "group_safe": [
        {
            "group_id": "9115285645797883905",
            "safe_id": "9115285645797883906",
            "password_visible": false,
            "use_time_policy": false,
            "group_name": "admin",
            "safe_name": "RDP",
            "created_at": "2025-05-07 23:56:15.424739-07",
            "modified_at": "2025-05-07 23:56:15.424739-07",
            "builtin": false,
            "hidden": false
        },
        {
            "group_id": "9115285645797883905",
            "safe_id": "9115285645797883907",
            "password_visible": false,
```

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```
            "use_time_policy": false,
            "group_name": "admin",
            "safe_name": "SSH",
            "created_at": "2025-05-07 23:56:15.450435-07",
            "modified_at": "2025-05-07 23:56:15.450435-07",
            "builtin": false,
            "hidden": false
        }
    ]
}
```


4.6.4 Get Safe Assigned to a Group by Their IDs

Request

Method	GET
Path	/group/<group_id>/safe/<safe_id>

GET /api/v2/group/<group_id>/safe/<safe_id>

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/group/9115285645797883905/safe/9115285645797883906
↪'
```

Response


```
{
    "result": "success",
    "group_safe": {
        "group_id": "9115285645797883905",
        "safe_id": "9115285645797883906",
        "password_visible": false,
        "use_time_policy": false,
        "group_name": "admin",
        "safe_name": "RDP",
        "created_at": "2025-05-07 23:56:15.424739-07",
        "modified_at": "2025-05-07 23:56:15.424739-07",
        "builtin": false,
        "hidden": false
    }
}
```

4.6.5 Create Group-Safe Assignment

Request

Method	`POST`
Path	`/api/v2/group/safe`
Headers	`Content-Type: Application/json`
Body	`GroupSafeModel`

POST /api/v2/group/safe

Example Request

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/group/safe' \
  -d'{"group_id":"9115285645797883905","safe_id":"9115285645797883906","use_
↪time_policy": true}'
```

Response

```
{
    "result": "success"
}
```

4.6.6 Modify Group-Safe Assignment

Request

Method	`PATCH`
Path	`/api/v2/group/<group_id>/safe/<safe_id>`
Headers	`Content-Type: Application/json`
Body	`GroupSafeModel`

PATCH /api/v2/group/<group_id>/safe/<safe_id>

Example Request

```
curl -s -k -X PATCH \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.31.87.227/api/v2/group/9115285645797883911/safe/
↪9115285645797883908' \
  -d'{"password_visible": true,"use_time_policy": false}'
```

Response

```
{
    "result": "success"
}
```

4.6.7 Delete Group-Safe Assignment

Request

Method	`DELETE`
Path	`/api/v2/group/<group_id>/safe/<safe_id>`

DELETE /api/v2/group/<group_id>/safe/<safe_id>

Example Request

```
curl -s -k -X DELETE \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.31.87.227/api/v2/group/9115285645797883905/safe/
↪9115285645797883908'
```

Response

```
{
    "result": "success"
}
```

4.7 API v2: Group-Safe-TimePolicy Management NEW

Endpoints in this section allow you to manage the time policy for accessing safes assigned to a group.

4.7.1 Data Structures

Table 6: `GroupSafeTimePolicyModel`

Attribute	Type	Required	Description
`id`	string		Read-only. Unique identifier.
`group_safe_id`	string		Read-only. Protected.
`group_id`	string	yes	Immutable. Requires rights to perform operations on the `group` object: `read` for GET, `modify` for POST, PATCH, and DELETE.
`safe_id`	string	yes	Immutable. Requires `read` right on the `safe` object for GET, POST, PATCH, and DELETE requests.
`group_name`	string		Read-only; Expensive to use.
`safe_name`	string		Read-only; Expensive to use.
`day_of_week`	number	yes	Value range from 1 to 7.
`valid_from`	datetime	yes	Daily access start time.
`valid_to`	datetime	yes	Daily access end time.
`created_at`	datetime		Read-only. Timestamp of creation.
`modified_at`	datetime		Read-only. Timestamp of modification.
`removed`	boolean		Read-only.

4.7.2 Retrieve Available Attributes of the *GroupSafeTimePolicyModel*

Request

Method	GET
Path	/api/v2/objspec/group_safe_time_policy

GET /api/v2/objspec/group_safe_time_policy

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.31.87.227/api/v2/objspec/group_safe_time_policy'
```

4.7.3 Get Group-Safe-TimePolicy Assignment List

Request

Method	GET
Path	/api/v2/group/safe/time_policy

GET /api/v2/group/safe/time_policy

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/group/safe/time_policy'
```

Response

```
{
    "result": "success",
    "group_safe_time_policy": [
        {
            "id": "9115285645797883905",
            "group_id": "9115285645797883906",
            "safe_id": "9115285645797883907",
            "group_name": "QA_team",
            "safe_name": "SSH",
            "day_of_week": 1,
            "valid_from": "06:00:00",
            "valid_to": "08:00:00",
            "created_at": "2025-05-08 03:12:37.235474-07",
            "modified_at": "2025-05-08 03:12:37.235474-07"
        },
        {
            "id": "9115285645797883906",
            "group_id": "9115285645797883906",
            "safe_id": "9115285645797883907",
```

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```
            "group_name": "QA_team",
            "safe_name": "SSH",
            "day_of_week": 1,
            "valid_from": "10:00:00",
            "valid_to": "12:00:00",
            "created_at": "2025-05-08 03:12:37.254555-07",
            "modified_at": "2025-05-08 03:12:37.254555-07"
        }
        {
            "id": "9115285645797883909",
            "group_id": "9115285645797883906",
            "safe_id": "9115285645797883907",
            "group_name": "QA_team",
            "safe_name": "SSH",
            "day_of_week": 2,
            "valid_from": "08:00:00",
            "valid_to": "10:00:00",
            "created_at": "2025-05-08 03:12:37.302277-07",
            "modified_at": "2025-05-08 03:12:37.302277-07"
        },
    ]
}
```


4.7.4 Get Group-Safe-TimePolicy Assignment by ID

Request

Method	GET
Path	/group/safe/time_policy/<id>

GET /api/v2/group/safe/time_policy/<id>

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/group/safe/time_policy/9115285645797883909'
```

Response


```
{
    "result": "success",
    "group_safe_time_policy": {
        "id": "9115285645797883909",
        "group_id": "9115285645797883906",
        "safe_id": "9115285645797883907",
        "group_name": "QA_team",
        "safe_name": "SSH",
        "day_of_week": 2,
```


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```
        "valid_from": "08:00:00",
        "valid_to": "10:00:00",
        "created_at": "2025-05-08 03:12:37.302277-07",
        "modified_at": "2025-05-08 03:12:37.302277-07"
    }
}
```

4.7.5 Create Group-Safe-TimePolicy Assignment

Request

Method	POST
Path	/api/v2/group/safe/time_policy
Headers	Content-Type: Application/json
Body	GroupSafeTimePolicyModel

POST /api/v2/group/safe/time_policy

Example Request

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/group/safe/time_policy' \
  -d'{"group_id":"9115285645797883906","safe_id":"9115285645797883907","day_of_
↪week":5,"valid_from":"06:00:00","valid_to":"12:00:00"}'
```

Response

```
{
    "result": "success",
    "group_safe_time_policy": {
        "id": "9115285645797883914"
    }
}
```

4.7.6 Modify Group-Safe-TimePolicy Assignment

Request

Method	PATCH
Path	/api/v2/group/safe/time_policy/<id>
Headers	Content-Type: Application/json
Body	GroupSafeTimePolicyModel

PATCH /api/v2/group/safe/time_policy/<id>

Example Request

```
curl -s -k -X PATCH \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.31.87.227/api/v2/group/safe/time_policy/9115285645797883915' \
  -d'{"day_of_week":3,"valid_from":"06:00:00","valid_to":"12:00:00"}'
```

Response

```
{
    "result": "success"
}
```

4.7.7 Delete Group-Safe-TimePolicy Assignment

Request

Method	DELETE
Path	/api/v2/group/safe/time_policy/<id>

DELETE /api/v2/group/safe/time_policy/<id>

Example Request

```
curl -s -k -X DELETE \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.31.87.227/api/v2/group/safe/time_policy/9115285645797883915'
```

Response

```
{
    "result": "success"
}
```

4.8 API v2: Group-User Assignment NEW

Endpoints in this section allow you to assign users to groups.

4.8.1 Data Structures

Table 7: `GroupUser`

Attribute	Type	Required	Description
`id`	string		Read-only. Protected.
`group_id`	string	yes	Immutable. Uniqueness is required in the combination of attribute `group_id` with attribute `user_id`. Requires rights to perform operations on the `group` object: `read` for GET, `user-add` for POST, `user-remove` for DELETE.
`user_id`	string	yes	Immutable. Uniqueness is required in the combination of attribute `user_id` with attribute `group_id`. Requires `read` right on the `user` object for GET, POST, and DELETE requests.
`group_name`	string		Read-only; Expensive to use.
`user_name`	string		Read-only; Expensive to use.
`created_at`	datetime		Read-only. Timestamp of creation.
`modified_at`	datetime		Read-only. Timestamp of modification.
`removed`	boolean		Read-only.

4.8.2 Retrieve Available Attributes of the *GroupUser*

Request

Method	`GET`
Path	`/api/v2/objspec/group_user`

GET /api/v2/objspec/group_user

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.31.87.227/api/v2/objspec/group_user'
```

4.8.3 Get Group-User Assignment List

Request

Method	`GET`
Path	`/api/v2/group/user`

GET /api/v2/group/user

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/group/user'
```

Response


```
{
    "result": "success",
    "group_user": [
        {
            "group_id": "9115285645797883906",
            "user_id": "9115285645797883906",
            "group_name": "QA_team",
            "user_name": "User_1",
            "created_at": "2025-05-07 23:56:45.451806-07",
            "modified_at": "2025-05-07 23:56:45.451806-07"
        },
        {
            "group_id": "9115285645797883906",
            "user_id": "9115285645797883907",
            "group_name": "QA_team",
            "user_name": "User_2",
            "created_at": "2025-05-07 23:56:45.462326-07",
            "modified_at": "2025-05-07 23:56:45.462326-07"
        }
    ]
}
```


4.8.4 Get Group-User Assignment by Their IDs

Request

Method	GET
Path	/group/<group_id>/user/<user_id>

GET /api/v2/group/<group_id>/user/<user_id>

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/group/9115285645797883906/user/9115285645797883907
↪'
```

Response


```
{
    "result": "success",
    "group_user": [
        {
            "group_id": "9115285645797883906",
            "user_id": "9115285645797883907",
            "group_name": "QA_team",
            "user_name": "User_2",
            "created_at": "2025-05-07 23:56:45.462326-07",
```


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```
            "modified_at": "2025-05-07 23:56:45.462326-07"
        }
    ]
}
```

4.8.5 Create Group-User Assignment

Request

Method	POST
Path	/api/v2/group/user
Headers	Content-Type: Application/json
Body	GroupUser

POST /api/v2/group/user

Example Request

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/group/user' \
  -d'{"group_id":"9115285645797883906","user_id":"91152856457978839 09"}'
```

Response

```
{
    "result": "success"
}
```

4.8.6 Delete Group-User Assignment

Request

Method	DELETE
Path	/api/v2/group/<group_id>/user/<user_id>

DELETE /api/v2/group/<group_id>/user/<user_id>

Example Request

```
curl -s -k -X DELETE \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.31.87.227/api/v2/group/9115285645797883906/user/
↪9115285645797883909'
```

Response

```
{
    "result": "success"
}
```

4.9 API v2: Object Rights NEW

4.9.1 Data Structures

Table 8: `ObjectRightsModels`

Attribute	Type	Required	Description
`name`	string	yes	Read-only.
`description`	string	yes	Read-only.

4.9.2 Retrieve Available Attributes of the *ObjectRightsModels*

Request

Method	`GET`
Path	`/api/v2/objspec/{objtype}_right`
Variants	• `/api/v2/objspec/account_right` • `/api/v2/objspec/group_right` • `/api/v2/objspec/pool_right` • `/api/v2/objspec/safe_right` • `/api/v2/objspec/server_right` • `/api/v2/objspec/user_right`

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

4.9.3 Get Available Rights Values for Object Types

Request

Method	`GET`
Path	`/api/v2/capability/right/{objtype}`
Variants	• `/api/v2/capability/right/account` • `/api/v2/capability/right/group` • `/api/v2/capability/right/pool` • `/api/v2/capability/right/safe` • `/api/v2/capability/right/server` • `/api/v2/capability/right/user`

Example Request

GET /api/v2/capability/right/account

```
curl -s -k -X GET \
  -H 'Authorization:sgfeea6jsaz4mum9su8w6' \
  'https://10.31.87.227/api/v2/capability/right/account'
```

Response


```
{
    "result": "success",
    "account_right": [
        {
            "name": "read",
            "description": ""
        },
        {
            "name": "modify",
            "description": ""
        },
        {
            "name": "delete",
            "description": ""
        },
        {
            "name": "block",
            "description": ""
        }
    ]
}
```


The table below lists the available `rights` values for each object type.

Object type	Available `rights` values
account	• `"read"` • `"modify"` • `"delete"` • `"block"`
group	• `"read"` • `"modify"` • `"delete"` • `"user-add"` • `"user-remove"`
pool	• `"read"` • `"modify"` • `"delete"` • `"server-add"` • `"server-remove"`

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Table 9 – continued from previous page

Object type	Available `rights` values
safe	• `"read"` • `"modify"` • `"delete"` • `"block"` • `"account-add"` • `"account-remove"` • `"group-add"` • `"group-remove"` • `"user-add"` • `"user-remove"`
server	• `"read"` • `"modify"` • `"delete"` • `"block"`
user	• `"read"` • `"modify"` • `"delete"` • `"block"` • `"session-view"`

4.10 API v2: Access Rights NEW

4.10.1 Data Structures

Table 10: `AccessModel`

Attribute	Type	Required	Description
`subject_id`	string		Read-only. Identifier of the subject (e.g., user or group). Uniqueness is required in the combination with attribute `object_id`.
`subject_name`	string		Read-only. Name of the subject. Expensive to use.
`object_id`	string		Read-only. Identifier of the target object (e.g., safe, server, account). Uniqueness is required in the combination with attribute `subject_id`.
`object_name`	string		Read-only. Name of the target object. Expensive to use.
`rights`	string-array		Read-only. List of assigned rights.

4.10.2 Retrieve Available Attributes of the *AccessModels*

Request

Method	`GET`
Path	`/api/v2/objspec/{objtype}_access`
Variants	• `/api/v2/objspec/account_access` • `/api/v2/objspec/group_access` • `/api/v2/objspec/pool_access` • `/api/v2/objspec/safe_access` • `/api/v2/objspec/server_access` • `/api/v2/objspec/user_access`

Example Request

GET /api/v2/objspec/account_access

```
curl -s -k -X GET \
  -H 'Authorization: proxycrypto' \
  'https://10.31.117.68/api/v2/objspec/account_access'
```

4.10.3 Get All Access Rules for Selected Object Type

Request

Method	`GET`
Path	`/api/v2/access/{objtype}`
Variants	• `/api/v2/access/account` • `/api/v2/access/group` • `/api/v2/access/pool` • `/api/v2/access/safe` • `/api/v2/access/server` • `/api/v2/access/user`

Example Request

GET /api/v2/access/safe

```
curl -s -k -X GET \
  -H 'Authorization: proxycrypto' \
  'https://10.31.117.68/api/v2/access/safe'
```

Response

```
{
    "result": "success",
    "safe_access": [
        {
```

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```
            "subject_id": "1",
            "subject_name": "system",
            "object_id": "2",
            "object_name": "portal",
            "rights": [
                "read",
                "modify",
                "delete",
                "block",
                "account-add",
                "account-remove",
                "group-add",
                "group-remove",
                "user-add",
                "user-remove"
            ]
        },
        {
            "subject_id": "1",
            "subject_name": "system",
            "object_id": "8673932882315575297",
            "object_name": "main",
            "rights": [
                "read",
                "modify",
                "delete",
                "block",
                "account-add",
                "account-remove",
                "group-add",
                "group-remove",
                "user-add",
                "user-remove"
            ]
        },
        {
            "subject_id": "8673932882315575297",
            "subject_name": "admin",
            "object_id": "2",
            "object_name": "portal",
            "rights": [
                "read",
                "modify",
                "delete",
                "block",
                "account-add",
                "account-remove",
                "group-add",
                "group-remove",
```


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```
                "user-add",
                "user-remove"
            ]
        },
        {
            "subject_id": "8673932882315575297",
            "subject_name": "admin",
            "object_id": "8673932882315575297",
            "object_name": "main",
            "rights": [
                "read",
                "modify",
                "delete",
                "block",
                "account-add",
                "account-remove",
                "group-add",
                "group-remove",
                "user-add",
                "user-remove"
            ]
        }
    ]
}
```


4.10.4 Get Access Rights of a Subject to a Specific Object

Request

Method	`GET`
Path	`/api/v2/access/<subject_id>/{objtype}/<object_id>`
Variants	• `/api/v2/access/<subject_id>/safe/<object_id>` • `/api/v2/access/<subject_id>/group/<object_id>` • `/api/v2/access/<subject_id>/pool/<object_id>` • `/api/v2/access/<subject_id>/safe/<object_id>` • `/api/v2/access/<subject_id>/server/<object_id>` • `/api/v2/access/<subject_id>/user/<object_id>`

Example: Retrieve Access Rights of User <user_id> to Group <group_id>

GET /api/v2/access/<user_id>/group/<group_id>

Note

`<user_id>` – Unique identifier (ID) of the user.

`<group_id>` – Unique identifier (ID) of the group.

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: proxycrypto' \
  'https://10.31.117.68/api/v2/access/8673932882315575297/group/
↪8673932882315575297'
```

Response

```
{
    "result": "success",
    "group_access": {
        "subject_id": "8673932882315575297",
        "subject_name": "admin",
        "object_id": "8673932882315575297",
        "object_name": "Group_1",
        "rights": [
            "read",
            "modify",
            "delete",
            "user-add",
            "user-remove"
        ]
    }
}
```

4.10.5 Examples of Filtered Access Requests

Example 1: Retrieve All Accounts Accessible by User <user_id>

Request

Method	GET
Path	/api/v2/access/account?filter=subject_id.eq(<user_id>)

Note

<user_id> – Unique identifier (ID) of the user.

GET /api/v2/access/account?filter=subject_id.eq(<user_id>)

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: proxycrypto' \
  'https://10.31.117.68/api/v2/access/account?filter=subject_id.
↪eq(8673932882315575297)'
```

Response

```
{
    "result": "success",
    "account_access": [
        {
            "subject_id": "8673932882315575297",
            "subject_name": "admin",
            "object_id": "8673932882315575299",
            "object_name": "ad-user1-windows",
            "rights": [
                "read",
                "modify",
                "delete",
                "block"
            ]
        },
        {
            "subject_id": "8673932882315575297",
            "subject_name": "admin",
            "object_id": "8673932882315575300",
            "object_name": "jools-Linux",
            "rights": [
                "read",
                "modify",
                "delete",
                "block"
            ]
        },
        {
            "subject_id": "8673932882315575297",
            "subject_name": "admin",
            "object_id": "8673932882315575301",
            "object_name": "root-fudo",
            "rights": [
                "read",
                "modify",
                "delete",
                "block"
            ]
        }
    ]
}
```


Example 2: Retrieve All Users with Access to Safe <safe_id>

Request

Method	`GET`
Path	`/api/v2/access/safe?filter=object_id.eq(<safe_id>)`

Note

<safe_id> – Unique identifier (ID) of the safe.

GET /api/v2/access/safe?filter=object_id.eq(<safe_id>)

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: proxycrypto' \
  'https://10.31.117.68/api/v2/access/safe?filter=object_id.
↪eq(8673932882315575297)'
```

Response

```
{
    "result": "success",
    "safe_access": [
        {
            "subject_id": "8673932882315575297",
            "subject_name": "admin",
            "object_id": "2",
            "object_name": "portal",
            "rights": [
                "read",
                "modify",
                "delete",
                "block",
                "account-add",
                "account-remove",
                "group-add",
                "group-remove",
                "user-add",
                "user-remove"
            ]
        },
        {
            "subject_id": "8673932882315575297",
            "subject_name": "admin",
            "object_id": "8673932882315575297",
            "object_name": "main",
            "rights": [
                "read",
                "modify",
                "delete",
                "block",
                "account-add",
                "account-remove",
                "group-add",
                "group-remove",
                "user-add",
```

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```
                "user-remove"
            ]
        }
    ]
}
```

Example 3: Retrieve Users Who Can Delete Server <server_id>

Request

Method	`GET`
Path	`/api/v2/access/server?filter=object_id.eq(<server_id>), rights.contains(delete)`

Note

`<server_id>` – Unique identifier (ID) of the server.

GET /api/v2/access/server?filter=object_id.eq(<server_id>),rights .contains(delete)

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: proxycrypto' \
  'https://10.31.117.68/api/v2/access/server?filter=object_id.
↪eq(8673932882315575301),rights.contains(delete)'
```

Response

```
{
    "result": "success",
    "server_access": [
        {
            "subject_id": "1",
            "subject_name": "system",
            "object_id": "8673932882315575301",
            "object_name": "fudo",
            "rights": [
                "read",
                "modify",
                "delete",
                "block"
            ]
        },
        {
            "subject_id": "8673932882315575297",
            "subject_name": "admin",
            "object_id": "8673932882315575301",
```

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```
            "object_name": "fudo",
            "rights": [
                "read",
                "modify",
                "delete",
                "block"
            ]
        }
    ]
}
```

4.11 API v2: Role-Based Capabilities NEW

4.11.1 Data Structures

Table 11: `RoleCapabilityModels`

Attribute	Type	Required	Description
`id`	string		Read-only, unique policy identifier. Protected.
`subject_id`	string	yes	Read-only; Immutable; Uniqueness is required in the combination of attribute `subject_id` with attribute `object_id`.
`object_id`	string	yes	Read-only; Immutable; Uniqueness is required in the combination of attribute `object_id` with attribute `subject_id`. Requires `read` right on the target object (`account`, `group`, `pool`, `safe`, `server`, or `user`, depending on the endpoint) for GET requests.
`rights`	string-array {read, modify, delete, block}; readwrite; default value `read`	yes	Expensive to use.
`object_name`	string	yes	Expensive to use.
`subject_name`	string	yes	Expensive to use.
`created_at`	datetime		Read-only. Timestamp of creation.
`modified_at`	datetime		Read-only. Timestamp of modification.
`removed`	boolean		Read-only.

4.11.2 Retrieve Available Attributes of the *RoleCapabilityModels*

Request

Method	`GET`
Paths	• `/api/v2/objspec/role_account_capability` • `/api/v2/objspec/role_group_capability` • `/api/v2/objspec/role_pool_capability` • `/api/v2/objspec/role_safe_capability` • `/api/v2/objspec/role_server_capability` • `/api/v2/objspec/role_user_capability`

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

4.11.3 Get Role-Based Capabilities for Objects

Request

Method	`GET`
Paths	• `/api/v2/capability/role/account` • `/api/v2/capability/role/group` • `/api/v2/capability/role/pool` • `/api/v2/capability/role/safe` • `/api/v2/capability/role/server` • `/api/v2/capability/role/use`

Example Request

GET /api/v2/capability/role/account

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.31.87.227/api/v2/capability/role/account'
```

Response

```
{
    "result": "success",
    "role_account_capability": [
        {
            "subject_id": "9115285645797883906",
            "object_id": "9115285645797883907",
            "rights": [
                "read"
            ],
            "object_name": "ad-user1-windows",
```

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```
            "subject_name": "admin",
            "created_at": "2025-04-30 02:08:09.033964-07",
            "modified_at": "2025-04-30 02:08:09.033964-07"
        },
        {
            "subject_id": "9115285645797883906",
            "object_id": "9115285645797883908",
            "rights": [
                "read"
            ],
            "object_name": "jools-Linux",
            "subject_name": "admin",
            "created_at": "2025-04-30 02:12:19.542946-07",
            "modified_at": "2025-04-30 02:12:19.542946-07"
        }
    ]
}
```


4.11.4 Assign Role-Based Capabilities for Objects

Request

Method	`POST`
Paths	• `/api/v2/capability/role/account` • `/api/v2/capability/role/group` • `/api/v2/capability/role/pool` • `/api/v2/capability/role/safe` • `/api/v2/capability/role/server` • `/api/v2/capability/role/user`
Headers	`Content-Type: Application/json`
Body	`RoleCapabilityModels`

Example Request

POST /api/v2/capability/role/user

```
curl -s -k -X POST \
  -H 'Authorization:sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.31.87.227/api/v2/capability/role/user' \
  -d'{"subject_id":9115285645797883906,"object_id":9115285645797883906}'
```

Response


```
{
    "result": "success"
}
```

4.11.5 Get Rights Assigned to a Role (Subject) for an Object by Their IDs

Request

Method	GET
Paths	• /api/v2/capability/role/<subject_id>/account/<object_id> • /api/v2/capability/role/<subject_id>/group/<object_id> • /api/v2/capability/role/<subject_id>/pool/<object_id> • /api/v2/capability/role/<subject_id>/safe/<object_id> • /api/v2/capability/role/<subject_id>/server/<object_id> • /api/v2/capability/role/<subject_id>/user/<object_id>

Example Request

GET /api/v2/capability/role/<subject_id>/user/<object_id>

```
curl -s -k -X GET \
  -H 'Authorization:sgfeea6jsaz4mum9su8w6' \
  'https://10.31.87.227/api/v2/capability/role/9115285645797883906/user/
↪9115285645797883906'
```

Response

```
{
    "result": "success",
    "role_user_capability": {
        "subject_id": "9115285645797883906",
        "object_id": "9115285645797883906",
        "rights": [
            "read",
            "modify",
            "delete",
            "session-view"
        ],
        "object_name": "User_1",
        "subject_name": "admin",
        "created_at": "2025-04-30 02:39:21.424866-07",
        "modified_at": "2025-04-30 03:47:33.568186-07"
    }
}
```

4.11.6 Modify Rights Assigned to a Role (Subject) for an Object by Their IDs

Request

Method	`PATCH`
Paths	• `/api/v2/capability/role/<subject_id>/account/<object_id>` • `/api/v2/capability/role/<subject_id>/group/<object_id>` • `/api/v2/capability/role/<subject_id>/pool/<object_id>` • `/api/v2/capability/role/<subject_id>/safe/<object_id>` • `/api/v2/capability/role/<subject_id>/server/<object_id>` • `/api/v2/capability/role/<subject_id>/user/<object_id>`
Headers	`Content-Type: Application/json`
Body	`RoleCapabilityModels`

Example Request

PATCH /api/v2/capability/role/<subject_id>/user/<object_id>

```
curl -s -k -X PATCH \
  -H 'Authorization:sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.31.87.227/api/v2/capability/role/9115285645797883906/user/
↪9115285645797883906' \
  -d'{"rights":["read","modify","delete","session-view"]}'
```

Note

The `read` right is mandatory and must always be included.

Response

```
{
    "result": "success"
}
```

4.11.7 Grant Specific Rights to a Role (Subject) for an Object by Their IDs

Request

Method	PATCH
Paths	• /api/v2/capability/role/<subject_id>/account/<object_id>/grant • /api/v2/capability/role/<subject_id>/group/<object_id>/grant • /api/v2/capability/role/<subject_id>/pool/<object_id>/grant • /api/v2/capability/role/<subject_id>/safe/<object_id>/grant • /api/v2/capability/role/<subject_id>/server/<object_id>/grant • /api/v2/capability/role/<subject_id>/user/<object_id>/grant
Headers	Content-Type: Application/json
Body	RoleCapabilityModels

Example Request

PATCH /api/v2/capability/role/<subject_id>/user/<object_id>/grant

```
curl -s -k -X PATCH \
  -H 'Authorization:sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.31.87.227/api/v2/capability/role/9115285645797883906/user/
↪9115285645797883906/grant' \
  -d'{"rights":["modify","delete","session-view"]}'
```

Response

```
{
    "result": "success"
}
```

4.11.8 Revoke Specific Rights to a Role (Subject) for an Object by Their IDs

Request

Method	PATCH
Paths	• /api/v2/capability/role/<subject_id>/account/<object_id>/revoke • /api/v2/capability/role/<subject_id>/group/<object_id>/revoke • /api/v2/capability/role/<subject_id>/pool/<object_id>/revoke • /api/v2/capability/role/<subject_id>/safe/<object_id>/revoke • /api/v2/capability/role/<subject_id>/server/<object_id>/revoke • /api/v2/capability/role/<subject_id>/user/<object_id>/revoke
Headers	Content-Type: Application/json
Body	RoleCapabilityModels

Example Request

PATCH /api/v2/capability/role/<subject_id>/user/<object_id>/revoke

```
curl -s -k -X PATCH \
  -H 'Authorization:sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.31.87.227/api/v2/capability/role/9115285645797883906/user/
↪9115285645797883906/revoke' \
  -d'{"rights":["modify","delete","session-view"]}'
```

Response

```
{
    "result": "success"
}
```

4.11.9 Delete Role-Based Capability Assigned to a Role (Subject) for an Object by Their IDs

Request

Method	DELETE
Paths	• /api/v2/capability/role/<subject_id>/account/<object_id> • /api/v2/capability/role/<subject_id>/group/<object_id> • /api/v2/capability/role/<subject_id>/pool/<object_id> • /api/v2/capability/role/<subject_id>/safe/<object_id> • /api/v2/capability/role/<subject_id>/server/<object_id> • /api/v2/capability/role/<subject_id>/user/<object_id>

Example Request

DELETE /api/v2/capability/role/<subject_id>/user/<object_id>

```
curl -s -k -X DELETE \
  -H 'Authorization:sgfeea6jsaz4mum9su8w6' \
  'https://10.31.87.227/api/v2/capability/role/9115285645797883906/user/
↪9115285645797883906'
```

Response

```
{
    "result": "success"
}
```

4.12 API v2: User-Based Capabilities NEW

4.12.1 Data Structures

Table 12: `UserCapabilityModels`

Attribute	Type	Required	Description
`id`	string		Read-only, unique policy identifier. Protected.
`subject_id`	string	yes	Read-only; Immutable; Uniqueness is required in the combination of attribute `subject_id` with attribute `object_id`. Requires `read` right on the `user` object for GET requests.
`object_id`	string	yes	Read-only; Immutable; Uniqueness is required in the combination of attribute `object_id` with attribute `subject_id`. Requires `read` right on the target object (`account`, `group`, `pool`, `safe`, `server`, or `user`, depending on the endpoint) for GET requests.
`rights`	string-array; read-write; default value `read`	yes	Expensive to use.
`object_name`	string	yes	Expensive to use.
`subject_name`	string	yes	Expensive to use.
`created_at`	datetime		Read-only. Timestamp of creation.
`modified_at`	datetime		Read-only. Timestamp of modification.
`removed`	boolean		Read-only.

4.12.2 Retrieve Available Attributes of the *UserCapabilityModels*

Request

Method	`GET`
Paths	• `/api/v2/objspec/user_account_capability` • `/api/v2/objspec/user_group_capability` • `/api/v2/objspec/user_pool_capability` • `/api/v2/objspec/user_safe_capability` • `/api/v2/objspec/user_server_capability` • `/api/v2/objspec/user_user_capability`

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

4.12.3 Get User-Based Capabilities for Objects

Request

Method	`GET`
Paths	• `/api/v2/capability/user/account` • `/api/v2/capability/user/group` • `/api/v2/capability/user/pool` • `/api/v2/capability/user/safe` • `/api/v2/capability/user/server` • `/api/v2/capability/user/use`

Example Request

GET /api/v2/capability/user/account

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w61877n1g06sk' \
  'https://10.31.87.227/api/v2/capability/user/account'
```

Response

```
{
    "result": "success",
    "user_account_capability": [
        {
            "subject_id": "9115285645797883905",
            "object_id": "9115285645797883907",
            "rights": [
                "read",
                "modify",
                "delete",
                "block"
            ],
            "object_name": "ad-user1-windows",
            "subject_name": "admin",
            "created_at": "2025-04-25 01:40:45.013273-07",
            "modified_at": "2025-04-25 01:40:45.013273-07"
        },
        {
            "subject_id": "9115285645797883905",
            "object_id": "9115285645797883908",
            "rights": [
                "read",
                "modify",
                "delete",
                "block"
            ],
            "object_name": "jools-Linux",
```

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```
            "subject_name": "admin",
            "created_at": "2025-04-25 01:40:45.965614-07",
            "modified_at": "2025-04-25 01:40:45.965614-07"
        }
    ]
}
```

4.12.4 Add User-Based Capabilities for Objects

Request

Method	`POST`
Paths	• `/api/v2/capability/user/account` • `/api/v2/capability/user/group` • `/api/v2/capability/user/pool` • `/api/v2/capability/user/safe` • `/api/v2/capability/user/server` • `/api/v2/capability/user/user`
Headers	`Content-Type: Application/json`
Body	`UserCapabilityModels`

Example Request

POST /api/v2/capability/user/account

```
curl -s -k -X POST -H \
  'Authorization:sgfeea6jsaz4mum9su8w61877n1g06sk' \
  -H 'Content-Type: application/json' \
  'https://10.31.87.227/api/v2/capability/user/account' \
  -d'{"subject_id":9115285645797883906,"object_id":9115285645797883907}'
```

Response

```
{
    "result": "success"
}
```

4.12.5 Get Rights Assigned to a User (Subject) for an Object by Their IDs

Request

Method	GET
Paths	• /api/v2/capability/user/<subject_id>/account/<object_id> • /api/v2/capability/user/<subject_id>/group/<object_id> • /api/v2/capability/user/<subject_id>/pool/<object_id> • /api/v2/capability/user/<subject_id>/safe/<object_id> • /api/v2/capability/user/<subject_id>/server/<object_id> • /api/v2/capability/user/<subject_id>/user/<object_id>

Example Request

GET /api/v2/capability/user/<subject_id>/account/<object_id>

```
curl -s -k -X GET \
  -H 'Authorization:sgfeea6jsaz4mum9su8w61877n1g06sk' \
  'https://10.31.87.227/api/v2/capability/user/9115285645797883906/account/
↪9115285645797883907'
```

Response

```
{
    "result": "success",
    "user_account_capability": {
        "subject_id": "9115285645797883906",
        "object_id": "9115285645797883907",
        "rights": [
            "read"
        ],
        "object_name": "ad-user1-windows",
        "subject_name": "User_1",
        "created_at": "2025-04-30 05:50:08.533293-07",
        "modified_at": "2025-04-30 05:50:08.533293-07"
    }
}
```

4.12.6 Modify Rights Assigned to a User (Subject) for an Object by Their IDs

Request

Method	PATCH
Paths	• /api/v2/capability/user/<subject_id>/account/<object_id> • /api/v2/capability/user/<subject_id>/group/<object_id> • /api/v2/capability/user/<subject_id>/pool/<object_id> • /api/v2/capability/user/<subject_id>/safe/<object_id> • /api/v2/capability/user/<subject_id>/server/<object_id> • /api/v2/capability/user/<subject_id>/user/<object_id>
Headers	Content-Type: Application/json
Body	UserCapabilityModels

Example Request

PATCH /api/v2/capability/user/<subject_id>/account/<object_id>

```
curl -s -k -X PATCH \
  -H 'Authorization:sgfeea6jsaz4mum9su8w61877n1g06sk' \
  -H 'Content-Type: application/json' \
  'https://10.31.87.227/api/v2/capability/user/9115285645797883906/account/
↪9115285645797883907' \
  -d'{"rights":["read","modify","delete"]}'
```

Note

The `read` right is mandatory and must always be included.

Response

```
{
    "result": "success"
}
```

4.12.7 Grant Specific Rights to a User (Subject) for an Object by Their IDs

Request

Method	PATCH
Paths	• /api/v2/capability/user/<subject_id>/account/<object_id>/grant • /api/v2/capability/user/<subject_id>/group/<object_id>/grant • /api/v2/capability/user/<subject_id>/pool/<object_id>/grant • /api/v2/capability/user/<subject_id>/safe/<object_id>/grant • /api/v2/capability/user/<subject_id>/server/<object_id>/grant • /api/v2/capability/user/<subject_id>/user/<object_id>/grant
Headers	Content-Type: Application/json
Body	UserCapabilityModels

Example Request

PATCH /api/v2/capability/user/<subject_id>/account/<object_id>/grant

```
curl -s -k -X PATCH \
  -H 'Authorization:sgfeea6jsaz4mum9su8w61877n1g06sk' \
  -H 'Content-Type: application/json' \
  'https://10.31.87.227/api/v2/capability/user/9115285645797883906/account/
↪9115285645797883907/grant' \
  -d'{"rights":["modify","delete"]}'
```

Response

```
{
    "result": "success"
}
```

4.12.8 Revoke Specific Rights to a User (Subject) for an Object by Their IDs

Request

Method	PATCH
Paths	• /api/v2/capability/user/<subject_id>/account/<object_id>/revoke • /api/v2/capability/user/<subject_id>/group/<object_id>/revoke • /api/v2/capability/user/<subject_id>/pool/<object_id>/revoke • /api/v2/capability/user/<subject_id>/safe/<object_id>/revoke • /api/v2/capability/user/<subject_id>/server/<object_id>/revoke • /api/v2/capability/user/<subject_id>/user/<object_id>/revoke
Headers	Content-Type: Application/json
Body	UserCapabilityModels

Example Request

PATCH /api/v2/capability/user/<subject_id>/account/<object_id>/revoke

```
curl -s -k -X PATCH \
  -H 'Authorization:sgfeea6jsaz4mum9su8w61877n1g06sk' \
  -H 'Content-Type: application/json' \
  'https://10.31.87.227/api/v2/capability/user/9115285645797883906/account/
↪9115285645797883907/revoke' \
  -d'{"rights":["modify","delete"]}'
```

Response

```
{
    "result": "success"
}
```

4.12.9 Delete User-Based Capability Assigned to a ser (Subject) for an Object by Their IDs

Request

Method	`DELETE`
Paths	• `/api/v2/capability/user/<subject_id>/account/<object_id>` • `/api/v2/capability/user/<subject_id>/group/<object_id>` • `/api/v2/capability/user/<subject_id>/pool/<object_id>` • `/api/v2/capability/user/<subject_id>/safe/<object_id>` • `/api/v2/capability/user/<subject_id>/server/<object_id>` • `/api/v2/capability/user/<subject_id>/user/<object_id>`

Example Request

DELETE /api/v2/capability/user/<subject_id>/account/<object_id>

```
curl -s -k -X DELETE \
  -H 'Authorization:sgfeea6jsaz4mum9su8w61877n1g06sk' \
  'https://10.31.87.227/api/v2/capability/user/9115285645797883906/account/
↪9115285645797883907'
```

Response

```
{
    "result": "success"
}
```

CHAPTER

FIVE

API V2: ACCOUNTS

Account defines the privileged account existing on the monitored server. It specifies the actual login credentials, user authentication mode: anonymous (without user authentication), regular (with login credentials substitution) or forward (with login and password forwarding); password changing policy as well as the password changer itself.

5.1 Data Structures: *AccountModel*

Table 1: `AccountModel`

Attribute	Type	Required	Description
`id`	string	yes	Read-only object Identifier. Requires rights to perform operations on the `account` object: `read` for GET, `modify` for PATCH, and `delete` for DELETE.
`name`	string	yes	Unique account's name
`description`	string	no	Object description
`note`	string		Read-only; expensive to use
`blocked`	boolean; default value `false`	yes	
`reason`	string	if `blocked` == `true`	
`type`	string {regular, forward, anonymous}	yes	Immutable
`category`	string {nonprivileged, privileged}		
`protocol`	string		Protocol of the pool or server which the account is assigned to. Read-only; expensive to use.
`server_id`	string	yes	
`server_name`	string		Read-only; expensive to use

continues on next page

Table 1 – continued from previous page

Attribute	Type	Required	Description
server_address	string		Read-only; expensive to use
server_mask	number		Read-only; expensive to use
server_port_first	number		Read-only; expensive to use
server_port_last	number		Read-only; expensive to use
server_port	number		Read-only; expensive to use
pool_id	string	yes	
pool_name	string		Read-only; expensive to use
hotseat	boolean; default value false	if type == regular	Enable to be informed about existing connections via the Access Gateway. Available for the server with protocol == rdp
method	string {account, passvn, password, sshkey}	if type == regular || forward	Authentication method
domain	string	if type == regular || forward	
login	string; may be empty	if type == regular	
secret	string; may be empty	if method == password || sshkey	
secret_passphrase	string	with sshkey	Passphrase to use to decrypt SSH private key.
ssh_public_key	string		SSH public key. Read-only; expensive to use.
ssh_fingerprint_sha256	string		SSH key SHA256 fingerprint. Read-only; expensive to use.
forward_domain	boolean; default value false	if type == forward	
servauth	boolean; default value false	if type == forward	Authentication against server
account_id	string	if method == account	
passvn_id	string	if method == passvn	
passvn_name	string		Read-only; expensive to use

continues on next page

Table 1 – continued from previous page

Attribute	Type	Required	Description
dump_mode	string {all, none, raw, noraw}; default value noraw	yes	Session recording options
retention_locked	boolean; default value false	yes	
retention_remove	number		Value range from 1 to 2147483647.
retention_external	number		Value range from 1 to 2147483647.
timestamp_enabled	boolean; default value false	yes	
ocr_enabled	boolean; default value false	yes	
ocr_lang	string {eng, pol, deu, hun, nor, rus, ukr}; if more than 1, separated by the + symbol	if ocr_enabled == true	
ssh_agent	boolean; default value false	yes	
rdp_remote_apps_only	boolean; default value false	yes	Restrict access to the account exclusively through remote applications.
password_lastupdate	datetime		Read-only
password_lastcheck	datetime		Read-only
password_change_policy_id	string	if type == regular	Password change policy identifier.
password_change_policy_name	string		Password change policy name. Read-only; expensive to use.
password_checkout_time_limit	datetime (h:m:s)	if password_change_on_checkin == true	
password_change_on_checkin	boolean		If set, password will be changed after last password checkin.
password_change_on_session_end	boolean		If set, password will be changed after session finishes.
password_change_trigger_pending	boolean		Waiting for password change after triggered. Read-only; expensive to use.
password_change_trigger_available	boolean		Can manually trigger password change request? Read-only; expensive to use.

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Table 1 – continued from previous page

Attribute	Type	Required	Description
password_changer_ids	string-array		Read-only; hidden; expensive to use
password_recovery	boolean		If set and password verification detects unknown password, password changer will try to recover the password to a known value.
last_login	datetime		Read-only; expensive to use
safes	object-array		JSON object array containing id, name, and position of assigned safes. Read-only; expensive to use.
safes_ids	string-array		Read-only; hidden; expensive to use
safe_names	string-array		Read-only; hidden; expensive to use
servers	object-array		Read-only; expensive to use; JSON object array containing id, mask, name, port and address of assigned servers.
servers_ids	string-array		Read-only; hidden; expensive to use
servers_names	string-array		Read-only; hidden; expensive to use
state	string {created, discovered, onboarded, quarantined}		Account's discovery state: discovered, onboarded, quarantined, or created (for manually created accounts). Read-only. Expensive to use.
discovered_at	datetime		Account discovered at timestamp. Read-only; expensive to use
onboarded_at	datetime		Account onboarded at timestamp. Read-only; expensive to use.
onboarded_by_id	string		User identifier who onboarded this account. ARead-only; expensive to use.

continues on next page

Table 1 – continued from previous page

Attribute	Type	Required	Description
`onboarded_by_name`	string		User name who onboarded this account. Read-only; expensive to use.
`quarantined_at`	datetime		Account quarantined at timestamp. Read-only; expensive to use.
`quarantined_by_id`	string		User identifier who quarantined this account. Read-only; expensive to use.
`quarantined_by_name`	string		User name who quarantined this account. Read-only; expensive to use.
`quarantine_reason`	string		Quarantine reason. Read-only; expensive to use.
`scanner_id`	string		Scanner identifier. Read-only; expensive to use.
`scanner_name`	string		Scanner name. Read-only; expensive to use.
`secret_exposed`	boolean		Determines if there is a user who checked out the current password and now has lost access to the account, e.g. the user is now blocked, deleted, or there is no longer a safe containing both the user and the account, and gives the user secret check out rights. Read-only; expensive to use.
`rights`	string-array		Read-only; list of rights the subject has to this object.
`created_at`	datetime		Read-only. Timestamp of creation.
`modified_at`	datetime		Read-only. Timestamp of modification.
`removed`	boolean		Read-only.
`builtin`	boolean		Read-only; expensive to use; if `true`, the object is not editable.

continues on next page

Table 1 – continued from previous page

Attribute	Type	Required	Description
`hidden`	boolean		Read-only; expensive to use; if `true`, the object is hidden in UI.

5.2 Retrieve Available Attributes of the *AccountModel*

Request

Method	`GET`
Path	`/api/v2/objspec/account`

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

Refer to the *Batch operations* topic to create nested requests for operating on the Account objects.

5.3 Create an Account

Request

Method	`POST`
Path	`/api/v2/account`
Headers	`Content-Type: Application/json`
Body	`AccountModel`

Example Request

POST /api/v2/account

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/account' \
  -d '{
    "name": "test-account",
    "type": "regular",
    "server_id": "1234567890",
    "method": "password",
    "login": "test-account-login",
    "domain": "my-domain"
  }'
```

Response

```
{
    "result": "success",
    "account": {
        "id": "1234567890123456"
    }
}
```

5.4 Get Accounts List

Request

Method	GET
Path	/api/v2/account

5.5 Get an Account

Request

Method	GET
Path	/api/v2/account/<id>

5.6 Modify an Account

Request

Method	PATCH
Path	/api/v2/account/<id>
Headers	Content-Type: Application/json
Body	AccountModel

Example Request: Enable OCR With German, English and Polish Languages for an Account

PATCH /api/v2/account/<id>

```
    { "ocr_enabled": true,
"ocr_lang": "deu+eng+pol"}
```

Response

```
{
    "result": "success"
}
```

5.7 Adding a Password Changer Policy to Account

Password changer policy can't be created via API, but can be assigned to a particular Account. It requires a password changer or/and password verifier assigned according to it's enabled options.

By default there is an existing password policy named *Static, without restrictions* with `id = 1`, which has no password change or verification functions assigned.

Request

Method	`PATCH`
Path	`/api/v2/account/<id>`
Headers	`Content-Type: Application/json`
Body	`AccountModel`

Example Request

PATCH /api/v2/account/<id>

```
{
        "domain":null,
        "password_change_policy_id":"2345678901234567"
}
```

Response

```
{
    "result": "success"
}
```

5.8 Modify Password Change Parameters for Account

Request

Method	`PATCH`
Path	`/api/v2/account/<id>`
Headers	`Content-Type: Application/json`
Body	`AccountModel`

Example Request

PATCH /api/v2/account/<id>

```
{
   "domain":null,
   "password_change_policy_id":"2345678901234567989",
   "password_checkout_time_limit":"06:59:00",
   "password_change_on_session_end":true,
   "password_change_on_checkin":true,
   "password_recovery":true
}
```

Response

```
{
    "result": "success"
}
```

5.9 Delete an Account

Request

Method	DELETE
Path	/api/v2/account/<id>

5.10 Managing Security Alerts

Request

Method	POST
Path	/api/v2/account/<account_id>/mark_sessions_as_safe

CHAPTER

SIX

API V2: ACCOUNT-SAFE-LISTENER ASSIGNMENT

Account defines the privileged account existing on the monitored server. It specifies the actual login credentials, user authentication mode: anonymous (without user authentication), regular (with login credentials substitution) or forward (with login and password forwarding); password changing policy as well as the password changer itself.

6.1 Data Structures: *AccountSafeListenerAssignmentModel*

Table 1: `AccountSafeListenerAssignmentModel`

Attribute	Type	Required	Description
`id`	string	yes	Read-only object Identifier
`account_id`	string	yes	Immutable. Uniqueness is required in the combination of attribute `account_id` with attributes `safe_id` and `listener_id`. Requires `read` right on the `account` object for GET, POST, PATCH and DELETE operations.
`safe_id`	string	yes	Immutable. Uniqueness is required in the combination of attribute `safe_id` with attributes `account_id` and `listener_id`. Requires `read` right on the `safe` object for GET, `account-add` right for POST and PATCH, and `account-remove` for DELETE.
`listener_id`	string	no	Immutable. Uniqueness is required in the combination of attribute `listener_id` with attributes `account_id` and `safe_id`.
`account_name`	string		Read-only; expensive to use
`account_type`	string		Read-only; expensive to use
`protocol`	string		Read-only; expensive to use
`server_id`	string		Read-only; expensive to use; `null` if pool is assigned.
`server_name`	string		Read-only; expensive to use; `null` if pool is assigned.
`pool_id`	string		Read-only; expensive to use; `null` if server is assigned.
`pool_name`	string		Read-only; expensive to use; `null` if server is assigned.
`safe_name`	string		Read-only; expensive to use
`listener_name`	string		Read-only; expensive to use
`created_at`	datetime		Read-only
`modified_at`	datetime		Read-only
`removed`	boolean		Read-only
`builtin`	boolean		Read-only; expensive to use; if `true`, the object is not editable.
`hidden`	boolean		Read-only; expensive to use; if `true`, the object is hidden in UI.

6.2 Retrieve Available Attributes of the *AccountSafeListener- AssignmentModel*

Request

Method	GET
Path	/api/v2/objspec/account_safe_listener

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

6.3 Get Account-Safe-Listener Assignment List

Request

Method	GET
Path	/api/v2/account/safe/listener

Example Request

GET /api/v2/account/safe/listener

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/account/safe/listener'
```

Response


```
{
    "result": "success",
    "account_safe_listener": [
        {
            "account_id": "1224979098644774915",
            "safe_id": "1224979098644774913",
            "listener_id": "1224979098644774914",
            "account_name": "ad-user1-windows",
            "account_type": "regular",
            "protocol": "rdp",
            "server_id": "1224979098644774915",
            "server_name": "windows",
            "safe_name": "main",
            "listener_name": "RDP:bastion",
            "created_at": "2025-08-25 05:08:28.879241-07",
            "modified_at": "2025-08-25 05:08:28.879241-07",
            "builtin": false,
            "hidden": false
        }
    ]
}
```

6.4 Get Account-Safe-Listener Assignment by ID's

Request

Method	GET
Path	/api/v2/account/<account_id>/safe/<safe_id>/listener/<listener_id>

Example Request

GET /api/v2/account/<account_id>/safe/<safe_id>/listener/<listener_id>

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/account/1232678819172646919/safe/
↪1232678819172646913/listener/1232678819172646914'
```

Response


```
{
    "result": "success",
    "account_safe_listener": {
        "account_id": "1232678819172646919",
        "safe_id": "1232678819172646913",
        "listener_id": "1232678819172646914",
        "account_name": "VNC_Admin",
        "account_type": "regular",
        "protocol": "vnc",
        "server_id": "1224979098644774918",
        "server_name": "VNC_Server",
        "safe_name": "VNC",
        "listener_name": "VNC_Listen",
        "created_at": "2025-09-22 03:03:08.656825-07",
        "modified_at": "2025-09-22 03:03:14.808987-07",
        "builtin": false,
        "hidden": false
    }
}
```


6.5 Create an Account-Safe-Listener Assignments

Request

Method	POST
Path	/api/v2/account/safe/listener
Headers	Content-Type: Application/json
Body	AccountSafeListenerAssignmentModel

Example Request

POST /api/v2/account/safe/listener

```
{
        "account_id": 1232678819172646919,
"safe_id": 123267881917264691 3,
"listener_id": 1232678819172646914
}
```

Response

```
{
        "result": "success",
        "account_safe_listener": {}
}
```

6.6 Modify an Account-Safe-Listener Assignment

Request

Method	PATCH
Path	/api/v2//account/<account_id>/safe/<safe_id>/listener/<listener_id>
Headers	Content-Type: Application/json
Body	AccountSafeListenerAssignmentModel

Example Request

PATCH /api/v2//account/<account_id>/safe/<safe_id>/listener/<listener_id>

```
curl -s -k -X PATCH \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
      -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/account/1232678819172646919/safe/
↪1232678819172646913/listener/1232678819172646914' \
      -d '{"listener_id":1232678819172646916}'
```

Response

```
{
    "result": "success"
}
```

6.7 Delete an Account-Safe-Listener Assignment

Request

Method	DELETE
Path	/api/v2/account/<account_id>/safe/<safe_id>/listener/<listener_id>

Example Request

DELETE /api/v2/account/<account_id>/safe/<safe_id>/listener/<listener_id>

```
curl -s -k -X DELETE \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/account/1232678819172646919/safe/
↪1232678819172646913/listener/1232678819172646914'
```

Response

```
{
        "result": "success"
}
```

CHAPTER

SEVEN

API V2: ACCOUNT NOTES

Account notes related endpoints enable managing messages displayed to users in the User Portal (Access Gateway).

7.1 Data Structures

Table 1: `AccountNoteModel`

Attribute	Type	Required	Description
`id`	string		Unique, read-only, protected account note identifier.
`account_id`	string	yes	Immutable. ID of the account to which the note is assigned. Requires rights to perform operations on the `account` object: `read` for GET, `modify` for POST, PATCH, and DELETE.
`note`	string		Note content.
`created_at`	datetime		Read-only. Timestamp of creation.
`modified_at`	datetime		Read-only. Timestamp of modification.
`removed`	boolean		Read-only.

7.2 Retrieve Available Attributes of the *AccountNoteModel*

Request

Method	`GET`
Path	`/api/v2/objspec/account_note`

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

7.3 Get a Note From Account

Request

Method	`GET`
Path	`/api/v2/account/<account_id>/note`

Example Request

GET /api/v2/account/<id>/note

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/account/9124292845052624908/note'
```

Response

```
{
    "note": "Note content.",
    "result": "success"
}
```

7.4 Assign Note to an Account

Request

Method	POST
Path	/api/v2/account/<account_id>/note
Headers	Content-Type: Application/json
Body	AccountNoteModel

Example Request

POST /api/v2/account/<id>/note

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/account/9124292845052624908/note' \
  -d'{"note":"Note content."}'
```

Response

```
{
    "result": "success"
}
```

7.5 Modify a Note

Request

Method	PATCH
Path	/api/v2/account/<account_id>/note
Headers	Content-Type: Application/json
Body	AccountNoteModel

Example Request

PATCH /api/v2/account/<id>/note

```
curl -s -k -X PATCH \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/account/9124292845052624908/note' \
  -d'{"note":"Note modified content."}'
```

Response

```
{
    "result": "success"
}
```

7.6 Deleting a Note

Request

Method	DELETE
Path	/api/v2/account/<account_id>/note

Example Request

DELETE /api/v2/account/<id>/note

```
curl -s -k -X DELETE \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/account/9124292845052624908/note'
```

Response

```
{
    "result": "success"
}
```

CHAPTER

EIGHT

API V2: MANAGING PASSWORD CHANGERS AND REMOTE APPS IN ACCOUNTS NEW

Account Script–related endpoints allow you to manage Password Changers and Remote Apps within the Accounts configuration.

Note

If you want to learn how to obtain the IDs of Password Changers and Remote Apps, see the following sections: *API v2: Remote Applications*, *API v2: Password Changers*.

8.1 Data Structures

Table 1: `AccountScriptModel`

Attribute	Type	Required	Description
`id`	string		Account Password Changer ID. Read-only, protected, unique object identifier.
`account_id`	string	yes	Account ID. Immutable. Requires rights to perform operations on the `account` object: `read` for GET, `modify` for POST, PATCH, and DELETE.
`password_chan`	string		Password changer ID. Immutable.
`remote_app_id`	string		Remote application ID. Read-only. Expensive to use.
`password_chan_name`	string	yes	Case insensitive password changer name. Read-only. Expensive to use.
`password_chan_type`	string {`change`, `verify`, `remoteapp`}		Type of password changer / verifier. Can be assigned only to accounts of type `regular`, using the `password` method, and with a defined `login`. An account can have multiple password changers, but only one password verifier. Read-only.

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Table 1 – continued from previous page

Attribute	Type	Required	Description
password_chan _transport	string	if password_ _type == change || verify	Transport layer for password changer. Read-only. Expensive to use.
remote_app_pa	string {LDAP, SSH, Telnet, WinRM}	if password_ _type == remoteapp	Path to the executable file of the remote app. Read-only. Expensive to use.
remote_app _arguments	string	if password_ _type == remoteapp	Arguments passed to the remote application as binary data. Read-only. Expensive to use.
position	number	if password_ _type == change	Order of execution for password changers. Value range from 1 to 2147483647. Uniqueness is required in the combination of attribute position with attribute account_id.
timeout	number		Value range from 1 to 2147483647. Script execution timeout, specified in seconds.
created_at	datetime		Read-only. Timestamp of creation.
modified_at	datetime		Read-only. Timestamp of modification.
removed	boolean		Read-only.

8.2 Retrieve Available Attributes of the *AccountScriptModel*

Request

Method	GET
Path	/api/v2/objspec/account_script

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

8.3 Get Password Changers and Remote Apps Assigned to Accounts

Request

Method	GET

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Table 2 – continued from previous page

Path	/api/v2/account_script

GET /api/v2/account_script

Example Request

```
curl -s -k -X GET  \
-H 'Authorization: sgfeea6jsaz4mum9su8w61877n1g06sk'  \
'https://10.0.214.98/api/v2/account_script'
```

Response


```
{
    "account_script": [
        {
            "account_id": "5683542729741565961",
            "created_at": "2025-06-06 01:00:34.800512-07",
            "id": "5683542729741565967",
            "modified_at": "2025-06-06 01:00:34.800512-07",
            "password_changer_id": "5683542729741565961",
            "password_changer_name": "powershell",
            "password_changer_type": "remoteapp",
            "remote_app_id": "5683542729741565961",
            "remote_app_path": "C:\\Windows\\System32\\WindowsPowerShell\\v1.0\\
↪powershell.exe"
        },
        {
            "account_id": "5683542729741565959",
            "created_at": "2025-06-06 00:57:09.61763-07",
            "id": "5683542729741565965",
            "modified_at": "2025-06-06 00:57:09.61763-07",
            "password_changer_id": "5683542729741565963",
            "password_changer_name": "putty-defined-variables",
            "password_changer_type": "remoteapp",
            "remote_app_arguments": "-l %%login%% -pw %%password%% -P %%port%% %
↪%host%%",
            "remote_app_id": "5683542729741565963",
            "remote_app_path": "C:\\Windows\\System32\\putty.exe"
        },
        {
            "account_id": "5683542729741565959",
            "created_at": "2025-06-06 00:57:09.628782-07",
            "id": "5683542729741565966",
            "modified_at": "2025-06-06 00:57:09.628782-07",
            "password_changer_id": "5683542729741565964",
            "password_changer_name": "tightvnc",
            "password_changer_type": "remoteapp",
            "remote_app_id": "5683542729741565964",
            "remote_app_path": "C:\\Program Files\\TightVNC\\tvnviewer.exe"
        }
```


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```
    ],
    "result": "success"
}
```

8.4 Get Password Changer or Remote App Assigned to an Account by Assignment ID

Request

Method	GET
Path	/api/v2/account_script/<id>

GET /api/v2/account_script/<id>

Example Request

```
curl -s -k -X GET  \
-H 'Authorization: sgfeea6jsaz4mum9su8w61877n1g06sk'  \
'https://10.0.214.98/api/v2/account_script/5683542729741565967'
```

Response

```
{
    "account_script": {
        "id": "5683542729741565967",
        "account_id": "568354272974156596l",
        "password_changer_id": "568354272974156596l",
        "remote_app_id": "568354272974156596l",
        "password_changer_type": "remoteapp",
        "password_changer_name": "powershell",
        "remote_app_path": "C:\\Windows\\System32\\WindowsPowerShell\\v1.0\\
↪powershell.exe",
        "variables": [ ],
        "created_at": "2025-06-06 01:00:34.800512-07",
        "modified_at": "2025-06-06 01:00:34.800512-07"
    },
    "result": "success"
}
```

8.5 Assign Password Changer or Remote App to an Account

Request

Method	POST
Path	/api/v2/account_script
Headers	Content-Type: Application/json

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Table 4 – continued from previous page

Body	`AccountScriptModel`

POST /api/v2/account_script

Example Request

```
curl -s -k -X POST  \
-H 'Authorization:sgfeea6jsaz4mum9su8w61877n1g06sk'  \
-H 'Content-Type: application/json'  \
https://10.31.96.188/api/v2/account_script \
-d'{"account_id": "5683542729741565961","remote_app_id": "5683542729741565957"}'
```

Response

```
{
    "account_script": {
        "id": "5683542729741565970"
    },
    "result": "success"
}
```

8.6 Modify Password Changer or Remote App Assignment for an Account

Request

Method	`PATCH`
Path	`/api/v2/account_script/<id>`
Headers	`Content-Type:  Application/json`
Body	`AccountScriptModel`

PATCH /api/v2/account_script/<id>

Example Request

```
curl -s -k -X PATCH  \
-H 'Authorization:sgfeea6jsaz4mum9su8w61877n1g06sk'  \
-H 'Content-Type: application/json'  \
https://10.31.96.188/api/v2/account_script/5683542729741565969 \
-d'{"account_id": "5683542729741565961","remote_app_id": "5683542729741565957"}'
```

Response

```
{
    "result": "success"
}
```

8.7 Delete Password Changer or Remote App Assignment from an Account

Request

Method	DELETE
Path	/api/v2/account_script/<id>

DELETE /api/v2/account_script/<id>

Example Request

```
curl -s -k -X DELETE \
-H 'Authorization:sgfeea6jsaz4mum9su8w61877n1g06sk' \
https://10.31.96.188/api/v2/account_script/5683542729741565970
```

Response

```
{
    "result": "success"
}
```

CHAPTER

NINE

API V2: USERS

User defines a subject entitled to connect to servers within monitored IT infrastructure. Detailed object definition (i.e. unique login and domain combination, full name, email address etc.) enables precise accountability of user actions when login and password are substituted with a shared account login credentials.

9.1 Data Structures: *UserModel*

Table 1: `UserModel`

Attribute	Type	Required	Description
`id`	string	yes	Read-only object identifier. Requires `read`, `modify`, or `delete` right on object type `user`, depending on the HTTP method used (`GET`, `PATCH`, or `DELETE` respectively).
`name`	string	yes	Unique user's name
`blocked`	boolean; default value `false`	yes	
`reason`	string	if `blocked` == `true`	
`domain`	string	no	User's domain
`privileges`	string-array		Read-only
`full_name`	string	no	User's full name
`email`	string	no	User's email address
`organization`	string	no	User's organization name
`phone`	string	no	User's phone number
`ad_domain`	string	no	User's AD domain
`ldap_base`	string	no	User's LDAP base
`language`	string {en, pl, ru, ua, kk}; default value `en`	yes	Interface language
`previous_success`	datetime		Read-only
`last_success`	datetime		Read-only
`last_failure`	datetime		Read-only
`failures`	number; default value 0	yes	Number of authentication failures

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Table 1 – continued from previous page

Attribute	Type	Required	Description
password_complexity	boolean; default value false	yes	Enable password complexity settings
external_sync	boolean; default value false	yes	
valid_since	datetime (h:m:s); default value -infinity	yes	Beginning access time
valid_to	datetime (h:m:s); default value infinity	yes	Ending access time
user_directory_id	string	no	Id of the user's LDAP server
source_ip	string	no	
pubkey_ec	string	with pubkey_rsa	Value format: public key.
pubkey_rsa	string	with pubkey_ec	Value format: public key.
pubkey_fingerprint	string		Read-only; expensive to use. Fingerprint of user's public keys.
pubkey_trusted_by	string		
pubkey_trusted_at	string		Read-only
invite_code	string		Read-only
invite_code_expires_	string		Read-only
invited_by	string		Read-only
fudo_network	boolean		Read-only; expensive to use.
oidc_subs	object-array		OpenID Connect sub claims. Read-only. Expensive.
roles	object-array		Read-only. Expensive to use.
role_names	string-array		Read-only. Hidden. Expensive to use.
role_ids	string-array		Read-only. Hidden. Expensive to use.
safes	object-array		Read-only; expensive to use; JSON object array containing id, name, and position of assigned safes.
safes_ids	string-array		Read-only; hidden; expensive to use
safe_names	string-array		Read-only; hidden; expensive to use
authentication_metho	object-array		Read-only; expensive to use; JSON object array containing id, type, and position of configured authentication methods.
rights	string-array		Read-only; list of rights the subject has to this object.

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Table 1 – continued from previous page

Attribute	Type	Required	Description
`created_at`	datetime		Read-only. Timestamp of creation.
`modified_at`	datetime		Read-only. Timestamp of modification.
`removed`	boolean		Read-only
`builtin`	boolean		Read-only; expensive to use; if `true`, the object is not editable.
`hidden`	boolean		Read-only; expensive to use; if `true`, the object is hidden in UI.

9.2 Get Available Attributes of the *UserModel*

Request

Method	`GET`
Path	`/api/v2/objspec/user`

9.3 Data Structures: *UserSafeAssignmentModel*

Table 2: `UserSafeAssignmentModel`

Attribute	Type	Required	Description
`id`	string	yes	Read-only object Identifier.
`user_id`	string	yes	Immutable. Uniqueness is required in the combination of attribute `user_id` with attribute `safe_id`. Requires `read` right on object type `user` for `GET`, `POST`, `PATCH`, and `DELETE` requests.
`roles`	object-array		Read-only. Expensive to use.
`role_names`	string-array		Read-only. Hidden. Expensive to use.
`role_ids`	string-array		Read-only. Hidden. Expensive to use.
`safe_id`	string	yes	Immutable. Uniqueness is required in the combination of attribute `safe_id` with attribute `user_id`. Requires `read` right on object type `safe` for `GET` and `PATCH` requests, `user-add` right for `POST`, and `user-remove` right for `DELETE` requests.
`blocked`	boolean; default value `false`	yes	Access to this safe is disabled for the user.

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Table 2 – continued from previous page

Attribute	Type	Required	Description
`position`	number		
`password_visible`	boolean; default value `false`	yes	Allow a user to use Secret Checkout feature and view passwords in the Access Gateway.
`time_policy_che`	string		Read-only; Expensive to use. Checksum computed from time policies used for this user-safe connection.
`use_time_policy`	boolean; default value `false`	yes	
`valid_since`	datetime (h:m:s); default value `-infinity`	yes	Beginning access time.
`valid_to`	datetime (h:m:s); default value `infinity`	yes	Ending access time.
`user_name`	string		Read-only; Expensive to use.
`user_domain`	string		Read-only; Expensive to use.
`user_email`	string		Read-only; Expensive to use.
`user_organizatic`	string		Read-only; Expensive to use.
`user_domain`	string		Read-only; Expensive to use.
`safe_name`	string		Read-only; Expensive to use.
`created_at`	datetime		Read-only.
`modified_at`	datetime		Read-only.
`removed`	boolean		Read-only.
`builtin`	boolean		Read-only; Expensive to use; If `true`, the object is not editable.
`hidden`	boolean		Read-only; Expensive to use; If `true`, the object is hidden in UI.

9.4 Retrieve Available Attributes of the *UserSafeAssignmentModel*

Request

Method	`GET`
Path	`/api/v2/objspec/user_safe`

9.5 Data Structures: *UserSafeTimePolicyAssignmentModel*

Table 3: `UserSafeTimePolicyAssignmentModel`

Attribute	Type	Required	Description
`id`	string	yes	Read-only object Identifier.
`user_safe_id`	string		Read-only object Identifier.
`user_id`	string	yes	Immutable. Requires `read` right on object type `user` for `GET` requests, and `modify` right for `POST`, `PATCH`, and `DELETE` requests.
`safe_id`	string	yes	Immutable. Requires `read` right on object type `safe` for `GET`, `POST`, and `PATCH` requests.
`user_name`	string		Read-only; Expensive to use.
`user_role`	string		Read-only; Expensive to use.
`safe_name`	string		Read-only; Expensive to use.
`day_of_week`	number	yes	Value range from `1` to `7`.
`valid_from`	datetime (h:m:s)	yes	Beginning access time.
`valid_to`	datetime (h:m:s)	yes	Ending access time.
`created_at`	datetime		Read-only.
`modified_at`	datetime		Read-only.
`removed`	boolean		Read-only.

9.6 Retrieve Available Attributes of the *UserSafeTimePolicy - AssignmentModel*

Request

Method	`GET`
Path	`/api/v2/objspec/user_safe_time_policy`

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

Refer to the *Batch operations* topic to create nested requests for operating on the User objects.

9.7 Create a User

Request

Method	`POST`
Path	`/api/v2/user`
Headers	`Content-Type: Application/json`
Body	`UserModel`

Example Request

POST /api/v2/user

```
{
"role": "user",
"name": "test-user",
"language":"en"
 }
```

Response

```
    {
"result": "success",
"user": {
    "id": "12345678901234567890"
}}
```

9.8 Get Users List

Request

Method	GET
Path	/api/v2/user

Example Request

GET /api/v2/user

Response

```
    {
"result": "success",
"user": [
    {
        "id": "1234567891012345",
        "name": "tet",
        "blocked": false,
        "role": "user",
        "full_name": "",
        "email": "",
        "phone": "",
        "ad_domain": "",
        "ldap_base": "",
        "language": "en",
        "failures": 0,
        "password_complexity": false,
        "external_sync": false,
        "valid_since": "-infinity",
        "valid_to": "infinity",
        "created_at": "2022-10-20 02:09:49.818029-07",
        "modified_at": "2022-10-20 02:09:49.818029-07"
```

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```
    },
    {
        "id": "12345678910123456",
        "name": "admin",
        "blocked": false,
        "role": "superadmin",
        "language": "en",
        "previous_success": "2022-10-25 05:33:19.377878-07",
        "last_success": "2022-10-25 06:03:39.084783-07",
        "last_failure": "2022-10-24 04:19:35.204557-07",
        "failures": -1,
        "password_complexity": false,
        "external_sync": false,
        "valid_since": "-infinity",
        "valid_to": "infinity",
        "created_at": "2022-10-20 02:01:32.093269-07",
        "modified_at": "2022-10-25 06:03:39.085472-07"
    }
]}
```


9.9 Get a User

Request

Method	`GET`
Path	`/api/v2/user/<id>`

9.10 Modify a User

Request

Method	`PATCH`
Path	`/api/v2/user/<id>`
Headers	`Content-Type: Application/json`
Body	`UserModel`

Example Request: Changing User Login

PATCH /api/v2/user/<id>

```
{
"name": "new-user"
}
```

Response

```
{ "result": "success"}
```

Example Request: Blocking a User

PATCH /api/v2/user/<id>

```
{"blocked": true,
 "reason": "lost rights"}
```

Response

```
{ "result": "success" }
```

9.11 Get User-Safe Assignments List

Request

Method	`GET`
Path	`/api/v2/user/safe`

9.12 Create a User-Safe Assignment

Request

Method	`POST`
Path	`/api/v2/user/safe`
Body	`UserSafeAssignment`

Example Request

POST /api/v2/user/safe

```
{ "user_id": "1232678819172646915",
        "safe_id": "1232678819172646913" }
```

Response

```
   { "result": "success",
"user_safe": {} }
```

9.13 Get Users' Time Policy Settings Within Safes

Request

Method	`GET`
Path	`/api/v2/user/safe/time_policy`

Example Request

GET /api/v2/user/safe/time_policy

Response (User's time policy is declared separately for each day)

```
    {
"result": "success",
"user_safe_time_policy": [
    {
        "id": "4602678819172646913",
        "safe_id": "4602678819172646913",
        "user_id": "4602678819172646914",
        "day_of_week": 2, <--- A user has access to the safe on Tuesday
        "valid_from": "09:00:00", <--- User's access starts at 9:00
        "valid_to": "14:00:00", <--- and ends at 14:00
        "created_at": "2022-10-26 02:25:19.155648-07",
        "modified_at": "2022-10-26 02:30:40.677788-07"
    },
    {
        "id": "4602678819172646914",
        "safe_id": "4602678819172646913",
        "user_id": "4602678819172646914",
        "day_of_week": 3, <--- A user has access to the safe on Wednesday
        "valid_from": "09:15:00", <--- User's access starts at 9:15
        "valid_to": "14:15:00", <--- and ends at 14:15
        "created_at": "2022-10-26 02:32:11.781045-07",
        "modified_at": "2022-10-26 02:32:11.781045-07"
    }]}
```

9.14 Get Users' Time Policy Settings Within Safes by ID

Request

Method	GET
Path	/api/v2/user/safe/time_policy/<id>

Example Request

GET /api/v2/user/safe/time_policy/<id>

Response (User's time policy is declared separately for each day)

```
    {
"result": "success",
"user_safe_time_policy": [
    {
        "id": "4602678819172646914",
        "safe_id": "4602678819172646913",
        "user_id": "4602678819172646914",
        "day_of_week": 3, <--- A user has access to the safe on Wednesday
        "valid_from": "09:15:00", <--- User's access starts at 9:15
        "valid_to": "14:15:00", <--- and ends at 14:15
        "created_at": "2022-10-26 02:32:11.781045-07",
        "modified_at": "2022-10-26 02:32:11.781045-07"
    }]}
```

9.15 Modify User's Time Policy Settings Within a Safe

Request

Method	PATCH
Path	/api/v2/user/safe/time_policy/<id>
Body	UserSafeTimePolicyAssignment

Example Request: Changing the day of user's access to Monday

PATCH /api/v2/user/safe/time_policy/<id>

```
{ "day_of_week": 1}
```

Response

```
{ "result": "success" }
```

9.16 Create User's Time Policy Settings Within a Safe

Request

Method	POST
Path	/api/v2/user/safe/time_policy
Body	UserSafeTimePolicyAssignment

Example Request: Creating User's Access to the the Safe for Thursday From 16:00 Till 23:00

POST /api/v2/user/safe/time_policy

```
{ "user_id": "1232678819172646915",
"safe_id": "1232678819172646913",
"day_of_week": 4,
"valid_from": "16:00:00",
"valid_to": "23:00:00"
}
```

Response

```
    { "result": "success",
"user_safe_time_policy": {
    "id": "1232678819172646915" }}
```

9.17 Delete User's Time Policy Settings Within a Safe

Request

Method	DELETE
Path	/api/v2/user/safe/time_policy/<id>

9.18 Delete User-Safe Assignment

Request

Method	DELETE
Path	/api/v2/user/<user_id>/safe/<safe_id>

9.19 Delete User

Request

Method	DELETE
Path	/api/v2/user/<id>

CHAPTER

TEN

API V2: USER AUTHENTICATION METHODS MANAGEMENT

Table 1: `UserAuthenticationMethodModel`

Attribute	Type	Required	Description
`id`	string	yes	Read-only object Identifier
`type`	string {password, oath, extauth, sshkey, certificate, duo, sms, apikey}	yes	Immutable
`user_id`	string	yes	Immutable. Uniqueness is required in the combination of attribute `user_id` with attribute `position`. Requires `read` right on object type `user` for `GET` requests, and `modify` right for `DELETE`, `PATCH`, and `POST` requests.
`user_name`	string		Read-only; Expensive to use
`position`	number	yes	Uniqueness is required in the combination of attribute `position` with attribute `user_id`.
`external_sync`	boolean; default value `false`	yes	
`secret`	string	if `type` == `duo` || `oath` || `password` || `sms` || `sshkey`	
`needs_change`	boolean; default value `false`	yes	

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Table 1 – continued from previous page

Attribute	Type	Required	Description
external_authentication_id	string	if type == duo || extauth || oath || sms	
apikey_device_id	string	if type == apikey	Read-only; Expensive to use
apikey_device_platfor	string	if type == apikey	Read-only; Expensive to use
apikey_device_pushid	string	if type == apikey	Read-only; Expensive to use
apikey_key	string	if type == apikey	Protected
certificate_subject	string	if type == certificate	
duo_user_id	string	if type == duo	
duo_username	string	if type == duo	
OATH	OATHAuthenticationMethodAttributes	if type == oath	OATH authentication method properties
sms_token	string	if type == sms	Read-only; Protected
sshkey_user_presence_required	boolean; default value true	if type == sshkey	
sshkey_verification_required	boolean; default value false	if type == sshkey	
sshkey_counter	number	if type == sshkey	Read-only
created_at	datetime		Read-only
modified_at	datetime		Read-only
removed	boolean		Read-only

Table 2: OATHAuthenticationMethodAttributes

Attribute	Type	Required	Description
oath_type	string {HOTP, TOTP}	yes	Immutable.
oath_initialize	boolean; default value false	yes	
oath_secret	string	yes	Protected.
oath_tokenlen	number	yes	Immutable; value range: [4, 16].
oath_timestep	number {30, 45, 60, 90, 120, 180, 300}	If oath_type == TOTP	
oath_counter	number; default value 0	yes	Read-only.
oath_timeshift	number; default value 0	If oath_type == TOTP	Read-only.
oath_url	null		Read-only.
oath_qrcode	null		Read-only.

10.1 Retrieve Available Attributes of the *UserAuthentication - MethodModel*

Request

Method	`GET`
Path	`/api/v2/objspec/user_authentication_method`

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

Refer to the *Batch operations* topic to create nested requests for operating on the User objects.

10.2 Listing User Authentication Configurations

Request

Method	`GET`
Path	`/api/v2/user/authentication`

Example Request

GET /api/v2/user/authentication`

Response


```
{
  "result": "success",
  "user_authentication_method": [
    {
      "id": "12345612345123",
      "user_id": "12345678901234567890",
      "type": "password",
      "needs_change": false,
      "position": 0,
      "external_sync": false,
      "created_at": "2022-10-25 06:35:12.95741-07",
      "modified_at": "2022-10-25 06:35:12.95741-07",
      "user_name": "test-user"
    },
    {
      "id": "1234561234512357466",
      "user_id": "12345678901234567890",
      "type": "sshkey",
      "needs_change": false,
      "position": 1,
      "external_sync": false,
      "sshkey_user_presence_required": true,
      "sshkey_verification_required": false,
      "sshkey_counter": 0,
```


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```
      "created_at": "2022-10-25 06:37:54.913056-07",
      "modified_at": "2022-10-25 06:37:54.913056-07",
      "user_name": "test-user"
    }
  ]
}
```

10.3 Listing Authentication Configurations for User

Request

Method	`GET`
Path	`/api/v2/user/<user_id>/authentication`

Example Request

GET /api/v2/user/<id>/authentication`

Response

```
{
  "result": "success",
  "user_authentication_method": [
    {
      "id": "12345612345123",
      "user_id": "12345678901234567890",
      "type": "password",
      "needs_change": false,
      "position": 0,
      "external_sync": false,
      "created_at": "2022-10-25 06:35:12.95741-07",
      "modified_at": "2022-10-25 06:35:12.95741-07",
      "user_name": "test-user"
    },
    {
      "id": "1234561234512357466",
      "user_id": "12345678901234567890",
      "type": "sshkey",
      "needs_change": false,
      "position": 1,
      "external_sync": false,
      "sshkey_user_presence_required": true,
      "sshkey_verification_required": false,
      "sshkey_counter": 0,
      "created_at": "2022-10-25 06:37:54.913056-07",
      "modified_at": "2022-10-25 06:37:54.913056-07",
      "user_name": "test-user"
    }
```

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```
  ]
}
```

10.4 Retrieve User Authentication Configuration by ID

Request

Method	`GET`
Path	`/api/v2/user/<user_id>/authentication/<id>`

Example Request

GET /api/v2/user/<id>/authentication/<id>`

Response

```
{
  "result": "success",
  "user_authentication_method": [
    {
      "id": "1234561234512357466",
      "user_id": "12345678901234567890",
      "type": "sshkey",
      "needs_change": false,
      "position": 1,
      "external_sync": false,
      "sshkey_user_presence_required": true,
      "sshkey_verification_required": false,
      "sshkey_counter": 0,
      "created_at": "2022-10-25 06:37:54.913056-07",
      "modified_at": "2022-10-25 06:37:54.913056-07",
      "user_name": "test-user"
    }
  ]
}
```

10.5 Create User Authentication Method

Request

Method	`POST`
Path	`/api/v2/user/<user_id>/authentication`
Headers	`Content-Type: Application/JSON`
Body	`UserAuthenticationMethodModel`

Example Request: Setting User Authentication Method - Static Password

POST /api/v2/user/<id>/authentication`

```
{
  "type": "password",
  "secret": "test-password"
}
```

Response

```
{
  "result": "success",
  "user_authentication_method": {
    "id": "12345612345123"
  }
}
```

Example Request: Setting User Authentication Method - API Key

Note

When creating *API Key* authentication method, you can:

- set `apikey_key=null` or skip this attribute in the request - API will generate an `apikey_key` and return it in the response.
- set `apikey_key=<plaintext>` - API will save provided plaintext without returning it in the response.
- set `apikey_key=sha512:<hash-base64-encoding>` - API will save provided hash. Please be informed that the *SHA512* hash should be encoded in *Base64* formatting.

Note

You can use following command to generate an `apikey_key` and its hash. The `apikey_key` will be saved in the `apikey.txt` file, and the hash will be saved in the `apikey.sha512` file.

```
(umask 077 && echo sha512:$(openssl rand 48 | openssl base64 | tee apikey.
↪txt | dd bs=64 count=1 | openssl sha512 -binary | openssl base64 -A) >␣
↪apikey.sha512)
```

Request:

POST /api/v2/user/<id>/authentication`

```
{
    "type": "apikey"
}
```

Response:

```
{
    "result": "success",
    "user_authentication_method": {
```

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```
        "id": "8511803295730237450",
        "apikey_key":
↪"Ah08ibgN98TAUsa8f7o3MDsJXnliodphdtSz5xzTsnVI4DLv0dfUn6s3BEubse7O"
    }
}
```

Request:

POST /api/v2/user/<id>/authentication`

```
{
    "type": "apikey",
    "position": 1,
    "apikey_key": "sha512:rPXbZAJ5q/
↪4GcHTC7ZOx8a568eVqrXuhzmmPjqHPMGovdbCaczEI7WxLw8oyAzKkUV2qWlr9n9g+70K4p12xKw==
↪"
}
```

Response:

```
{
    "result": "success",
    "user_authentication_method": {
        "id": "8511803295730237478"
    }
}
```

Note

The `apikey_key` plain text is available only during authentication method creation process. Please remember to copy and archive it if needed.

10.6 Modify User Authentication Method

Request

Method	`PATCH`
Path	`/api/v2/user/<user_id>/authentication/<id>`
Headers	`Content-Type: Application/JSON`
Body	`UserAuthenticationMethodModel`

Example Request

Request

PATCH /api/v2/user/<id>/authentication/<id>`

```
{
  "position": 1
}
```

Response

```
{
  "result": "success"
}
```

10.7 Deleting User Authentication Method

Request

Method	`DELETE`
Path	`/api/v2/user/<user_id>/authentication/<id>`

DELETE /api/v2/user/<id>/authentication/<id>`

Response

```
{
  "result": "success"
}
```

CHAPTER

ELEVEN

API V2: USER DEVICES NEW

11.1 Data Structures

Table 1: `UserDeviceModel`

Attribute	Type	Required	Description
`id`	string		Read-only. Unique identifier. Protected.
`user_authentic`	string		Read-only. Unique identifier of the associated authentication method.
`platform`	string	yes	Mobile device platform. It cannot be changed once it has been initialized. Available values: `android`, `ios`.
`pushid`	string	yes	A mobile device identifier necessary to address the device we want to send a push notification. Protected.
`user_id`	string	yes	Immutable. Unique per device. Requires `read` right on the `user` object for `PATCH` requests.
`created_at`	datetime		Read-only. Timestamp of creation.
`modified_at`	datetime		Read-only. Timestamp of modification.
`removed`	boolean		Read-only.

11.2 Retrieve Available Attributes of the *UserDeviceModel*

Request

Method	`GET`
Path	`/api/v2/objspec/user_device`

GET /api/v2/objspec/user_device

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/objspec/user_device'
```

11.3 Update Mobile Device for Authentication Method

Request

Method	`PATCH`
Path	`/api/v2/user/<user_id>/authentication/<user_authentication_method_id>/device`
Headers	`Content-Type: Application/json`
Body	`UserDeviceModel`

PATCH /api/v2/user/<user_id>/authentication/<user_authentication_method_id>/device

Example Request

```
curl -s -k -X PATCH \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/user/9115285645797883905/authentication/
↪9115285645797883999/device' \
  -d '{"pushid": "cihaz-uuid-1234abcd"}'
```

Response

```
{
  "result": "success"
}
```

CHAPTER

TWELVE

API V2: USER MOBILE ACCESS (FUDO OFFICER) NEW

12.1 Get the User Mobile Access Status

This endpoint returns information about the availability of mobile access for the specified user.

> **Note**
>
> If the **Call Home** feature is disabled, mobile access is not supported and application binding and unbinding operations are unavailable (`is_supported`, `can_bind`, `can_unbind` set to `false`). If the **Call Home** feature is enabled, mobile access is supported and both binding and unbinding operations are available (`true` for all fields).

Request

Method	`GET`
Path	`/api/v2/user/<user_id>/mobile/access`
Headers	`Content-Type: Application/json`

GET /api/v2/user/<user_id>/mobile/access

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/user/1224979098644774913/mobile/access'
```

Response

```
{
    "result": "success",
    "mobile_access": {
        "is_supported": true,
        "can_bind": true,
        "can_unbind": true
    }
}
```

12.2 Delete User Mobile Access Binding

This endpoint removes (unbinds) the mobile access binding for the specified user.

Request

Method	`DELETE`
Path	`/api/v2/user/<user_id>/mobile/access`
Headers	`Content-Type: Application/json`

DELETE /api/v2/user/<user_id>/mobile/access

Example Request

```
curl -s -k -X DELETE \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/user/1224979098644774913/mobile/access'
```

Response

```
{
    "result": "success"
}
```

CHAPTER

THIRTEEN

API V2: EXTERNAL AUTHENTICATION

13.1 Data Structures

Table 1: `ExternalAuthenticationModel`

Attribute	Type	Required	Description
`id`	string	yes	Read-only object identifier
`name`	string	yes	Unique; case insensitive
`type`	string {cerb, radius, ldap, ad}	yes	Immutable
`address`	string	If `type` == `cerb` || `ldap` || `radius` & `port` is set	Authentication server address. Required for selected types if port is set.
`port`	number	If `type` == `cerb` || `ldap` || `radius` & `address` is set	Server port. Must be used with address. Value format: port.
`bind_ip`	string	no	Bind address. Include labels like 'fudo:label:test' or ip address
`cerb`	ExternalAuthentication-CerbModel	If `type` == `cerb`	Cerb object definiton
`radius`	ExternalAuthentication-RadiusModel	If `type` == `radius`	Radius object definiton
`ldap`	ExternalAuthentication-LdapModel	If `type` == `ldap`	LDAP object definiton
`ad`	ExternalAuthentication-AdModel	If `type` == `ad`	Active Directory object definiton
`tls_enabled`	boolean	If `type` == `ad` || `ldap`	Enable TLS protocol
`tls_certificate`	string	If `type` == `ldap` & `tls_enabled` == `true`	Client TLS certificate. Format: X.509.

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Table 1 – continued from previous page

Attribute	Type	Required	Description
`tls_ca_certificate`	string	If `type == ad || ldap & tls_enabled == true`	CA certificate for TLS validation. Format: X.509.
`second_factor_type`	string {duo, oath, sms}	no	
`created_at`	datetime		Read-only
`modified_at`	datetime		Read-only
`removed`	boolean		Read-only

Table 2: `ExternalAuthenticationCerbModel`

Attribute	Type	Description
`secret`	string	Password to cerb provider; required; write-only
`radius_nasid`	string	Correct value of NAS id of Cerb provider

Table 3: `ExternalAuthenticationRadiusModel`

Attribute	Type	Description
`secret`	string	Password to cerb provider; required; write-only
`radius_nasid`	string	Correct value of NAS id of Radius provider

Table 4: `ExternalAuthenticationLdapModel`

Attribute	Type	Description
`ldap_binddn`	string	Bind domain to LDAP provider; required

Table 5: `ExternalAuthenticationAdModel`

Attribute	Type	Description
`login`	string	
`secret`	string	Password to cerb provider; required; write-only
`ad_domain`	string	Bind domain to AD provider; required

13.2 Retrieve Available Attributes of the *ExternalAuthentication- Model*

Request

Method	`GET`
Path	`/api/v2/objspec/external_authentication`

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

Refer to the *Batch operations* topic to create nested requests for operating on the External Authentication objects.

13.3 Get External Authentication Methods List

Request

Method	`GET`
Path	`/api/v2/external_authentication`

Example Request

GET /api/v2/external_authentication`

Response


```
{
        "result": "success",
        "external_authentication": [
            {
                "id": "1234538875067072557",
                "type": "ad",
                "port": 636,
                "ad_domain": "jdoe.local",
                "created_at": "2021-08-09 19:40:05.171853+02",
                "modified_at": "2021-08-09 19:40:05.171853+02",
                "address": "10.0.139.100",
                "tls_enabled": true,
                "tls_certificate": "-----BEGIN CERTIFICATE-----\r\
↪nMIIFrTCCBJWgAwIBAg...ic=\r\n-----END CERTIFICATE-----\r\n"
            },
            {
                "id": "12345138875067072517",
                "type": "ldap",
                "port": 389,
                "ldap_binddn": "dc=qa-ldap,dc=null",
                "created_at": "2021-03-03 14:11:52.245683+01",
                "modified_at": "2021-03-03 14:14:46.052855+01",
                "address": "10.0.235.1",
                "tls_enabled": false,
                "tls_certificate": ""
            },
            {
                "id": "12345067072573",
                "type": "cerb",
                "port": 1812,
                "created_at": "2022-10-19 10:23:11.29545+02",
                "modified_at": "2022-10-19 10:58:12.325396+02",
```


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```
                "address": "10.0.234.21",
                "radius_nasid": "",
                "tls_enabled": false,
                "tls_certificate": ""
            },
            {
                "id": "3234566775067072572",
                "type": "radius",
                "port": 1812,
                "created_at": "2022-10-19 10:08:23.160433+02",
                "modified_at": "2022-10-19 10:19:50.525671+02",
                "second_factor_type": "oath",
                "address": "10.0.0.1",
                "radius_nasid": "abcdeg",
                "tls_enabled": true,
                "tls_certificate": "-----BEGIN CERTIFICATE-----\r\nMIIG5jC...
↪2MOXV1x+eQAmOVy\r\n-----END CERTIFICATE-----\r\n"
                }
        ]
}
```


13.4 Get External Authentication Method by ID

Request

Method	GET
Path	/api/v2/external_authentication/<id>

Example Request

GET /api/v2/external_authentication/<id>`

Response


```
{
        "result": "success",
        "external_authentication": [
                {
                        "id": "1234538875067072557",
                        "type": "ad",
                        "port": 636,
                        "ad_domain": "jdoe.local",
                        "created_at": "2021-08-09 19:40:05.171853+02",
                        "modified_at": "2021-08-09 19:40:05.171853+02",
                        "address": "10.0.139.100",
                        "tls_enabled": true,
                        "tls_certificate": "-----BEGIN CERTIFICATE-----\r\
↪nMIIFrTCCBJWgAwIBAg...ic=\r\n-----END CERTIFICATE-----\r\n"
                }
```


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```
        ]
}
```

13.5 Modify External Authentication Method

Request

Method	`PATCH`
Path	`/api/v2/external_authentication/<id>`
Headers	`Content-Type: Application/JSON`
Body	`ExternalAuthenticationModel`

Example Request: Adding SMS Authentication for Second Factor to AD Authentication

PATCH /api/v2/external_authentication/<id>`

```
{
        "second_factor_type": "sms"
}
```

Response

```
{
        "result": "success"
}
```

13.6 Create an External Authentication Method

Request

Method	`POST`
Path	`/api/v2/external_authentication`
Headers	`Content-Type: Application/JSON`
Body	`ExternalAuthenticationModel`

Example Request: Creating Cerb Definition With Second Factor OATH Authentication

POST /api/v2/external_authentication`

```
{
        "type": "cerb",
        "port": 1812,
        "address": "10.0.234.21",
        "radius_nasid": "abcds",
        "secret": "my-password",
```

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```
        "tls_enabled": false,
        "second_factor_type": "oath"
}
```

Response

```
{
        "result": "success",
        "external_authentication": {
                "id": "123456819172646913"
        }
}
```

13.7 Delete an External Authentication Method

Request

Method	DELETE
Path	/api/v2/external_authentication/<id>

CHAPTER

FOURTEEN

API V2: SERVERS

Server is a definition of the IT infrastructure resource, which can be accessed over one of the specified protocols.

14.1 Data Structures

Table 1: `ServerModel`

Attribute	Type	Required	Description
`id`	string	yes	Unique, read-only object identifier. Requires `read` right on object type `server` for `GET` requests, `modify` for `PATCH` requests, and `delete` for `DELETE` requests.
`name`	string	yes	Unique server's name.
`description`	string	no	Object description.
`blocked`	boolean; default value `false`	yes	
`reason`	string	if `blocked` == `true`	
`bind_ip`	string		Required format: IP address or `fudo:label:<ip_label_name>` for labeled IP addresses.
`address`	string	yes	IP address. Uniqueness is required in the combination of attribute `address` with attributes `mask`, `port_first` and `port_last`

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Table 1 – continued from previous page

Attribute	Type	Required	Description
mask	number {from 0 to 128}	no	Uniqueness is required in the combination of attribute mask with attributes address, port_first and port_last.
port_first	number		Value-format: port. Uniqueness is required in the combination of attribute port_first with attributes address, mask and port_last.
port_last	number		Value-format: port. Uniqueness is required in the combination of attribute port_last with attributes address, mask and port_first.
port	number	yes	Value-format: port. Read-write. Expensive to use. Port number used if no port range is defined. Uniqueness is required in the combination of attribute port with attributes address and mask.
legacy_crypto	boolean; default value false	If protocol == rdp || ssh || http || mysql || telnet || tn3270 || tn5250 || rdp & tls_enabled == true	Enabling legacy cryptographic protocols and settings.
protocol	string{http, modbus, mysql, rdp, ssh, system, tcp, tds, telnet, tn3270, tn5250, vnc}	yes	Immutable, case insensitive.
http	HTTPServerAttributes	If protocol == http	HTTP protocol properties.

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Table 1 – continued from previous page

Attribute	Type	Required	Description
`mysql`	MySQLServerAttributes	If `protocol == mysql`	MySQL protocol properties.
`rdp`	RDPServerAttributes	If `protocol == rdp`	RDP protocol properties.
`tls`	TLSServerAttributes	If `tls_enabled == true`	TLS protocol properties.
`ssh_public_key`	string	If `protocol == ssh`	SSH public key. Value format: ssh public key.
`last_login`	datetime		Read-only; Expensive to use.
`pools`	object-array		Read-only; Expensive to use; JSON object array containing `id` and `name` of assigned pools.
`pools_ids`	string-array		Read-only; hidden; expensive to use
`pools_names`	string-array		Read-only; hidden; expensive to use
`state`	string		Server's discovery state: discovered, onboarded, quarantined or created (for manually created accounts). Read-only. Expensive to use.
`discovered_at`	datetime		Read-only. Expensive to use. Server discovered at timestamp.
`onboarded_at`	datetime		Read-only. Expensive to use. Server onboarded at timestamp.
`onboarded_by_id`	string		Read-only. Expensive to use. Unique identifier of the user who performed the onboarding.
`onboarded_by_na`	string		Read-only. Expensive to use. Name of the user who performed the onboarding.

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Table 1 – continued from previous page

Attribute	Type	Required	Description
quarantined_at	datetime		Read-only. Expensive to use. Server quarantined at timestamp.
quarantined_by_	string		Read-only. Expensive to use. Unique identifier of the user who performed the quarantine.
quarantined_by_	string		Read-only. Expensive to use. Name of the user who performed the quarantine.
scanner_id	string		Read-only. Expensive to use. Unique identifier of a scanner used to discover this server.
scanner_name	string		Read-only. Expensive to use. Name of a scanner used to discover this server.
rights	string-array		Read-only; list of rights the subject has to this object.
created_at	datetime		Read-only. Timestamp of creation.
modified_at	datetime		Read-only. Timestamp of modification.
builtin	boolean		Read-only; Expensive to use; If `true`, the object is not editable.
hidden	boolean		Read-only; Expensive to use; If `true`, the object is hidden in UI.

Table 2: `HTTPServerAttributes`

Attribute	Type	Required	Description
`http_host`	string	yes	HTTP host header value.
`http_timeout`	number {seconds}	yes	Period of inactivity, after which the user will have to authenticate again.
`http_authentication`	boolean; default value `false`	no	
`http_authentication_method`	string {Asana, Azure, Facebook, HPE BladeSystem, HPE iLO, HTTP Authentication, LinkedIn, Salesforce, Twitter}; Default value `null`	If `http_authentication` == `true`	Case insensitive.
`http_username_element`	string	If `http_authentication` == `true` & `http_authentication_method` == `null`	Custom login page details.
`http_press_enter`	boolean; default value `false`	If `http_authentication` == `true` & `http_authentication_method` == `null`	The *Press the enter key prior to password* option.
`http_password_element`	string	If `http_authentication` == `true` & `http_authentication_method` == `null`	Custom login page details.
`http_signon_realm`	string	If `http_authentication` == `true` & `http_authentication_method` == `null`	Custom login page details.

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Table 3: `MySQLServerAttributes`

Attribute	Type	Required	Description
`mysql`	boolean; default value `false`	If `protocol == mysql & tls_enabled == true`	

Table 4: `RDPServerAttributes`

Attribute	Type	Required	Description
`rdp_hotseat`	boolean; default value `false`	If `protocol == rdp`	The option to have the users informed that other users are connected to the server, they are trying to connect to.
`rdp_nla_enabled`	boolean; default value `true`	If `protocol == rdp & tls_enabled == true`	
`rdp_public_key`	string	If `protocol == rdp & tls_enabled == false`	RDP public key. Value format: public-key.

Table 5: `TLSServerAttributes`

Attribute	Type	Required	Description
`tls_enabled`	boolean; default value `true`	If `protocol == rdp || http || mysql || telnet || tn3270 || tn5250`	Enabling the TLS protocol.
`tls_ca_certifica`	string	If `protocol == rdp || http || mysql || telnet || tn3270 || tn5250 & tls_enabled == true`	TLS CA certificate. Value format: x509-certificate
`tls_certificate`	string	If `protocol == rdp || http || mysql || telnet || tn3270 || tn5250 & tls_enabled == true`	TLS certificate. Value format: x509-certificate

14.2 Retrieve Available Attributes of the *ServerModel*

Request

Method	GET
Path	/api/v2/objspec/server

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

Refer to the *Batch operations* topic to create nested requests for operating on the Server objects.

14.3 Create a Server

Request

Method	POST
Path	/api/v2/server
Headers	Content-Type: Application/json
Body	ServerModel

Example Request

POST /api/v2/server

```
     {
"name": "my-1st-rdp-server",
"protocol": "rdp",
"address": "10.0.2.0",
"port": 3389,
"legacy_crypto": false
     }
```

Response

```
   { "result": "success",
"server": {
   "id": "41234678819172646916" }}
```

14.4 Get Servers List

Request

Method	GET
Path	/api/v2/server

14.5 Get a Server

Request

Method	GET
Path	/api/v2/server/<id>

Example Request

GET /api/v2/server/<id>


```
    {
"result": "success",
"server": {
    "id": "4602678819172646916",
    "name": "my-1st-rdp-server",
    "blocked": false,
    "address": "10.0.2.0",
    "mask": 32,
    "port": 3389,
    "protocol": "rdp",
    "legacy_crypto": false,
    "rdp_hotseat": false,
    "rdp_nla_enabled": true,
    "tls_enabled": true,
    "tls_use_ca_store": false,
    "created_at": "2022-10-27 01:43:39.688273-07",
    "modified_at": "2022-10-27 01:43:39.688273-07",
    "last_login": "-infinity"
}}
```


14.6 Modify a Server

Request

Method	`PATCH`
Path	`/api/v2/server/<id>`
Headers	`Content-Type: Application/json`
Body	`ServerModel`

Example Request: Enable Using CA Store for Server Verification

PATCH /api/v2/server/<id>


```
{"tls_use_ca_store": true}
```


Response


```
{ "result": "success" }
```


14.7 Deleting a Server

Request

Method	`DELETE`
Path	`/api/v2/server/<id>`

CHAPTER

FIFTEEN

API V2: POOLS

Pools serve grouping purposes for the server objects based on the same protocol to be managed within other objects (for example, accounts) as one server.

15.1 Data Structures

Table 1: `PoolModel`

Attribute	Type	Required	Description
`id`	string	yes	Read-only object identifier. Requires the following rights on object type `pool` depending on the HTTP method used: `GET` → `read`, `PATCH` → `modify`, `DELETE` → `delete`.
`name`	string	yes	Unique pool's name
`description`	string	no	
`servers`	object-array		Read-only; expensive to use; JSON object array containing `id`, `mask`, `name`, `port` and `address` of assigned servers.
`server_ids`	string-array		Read-only; hidden; expensive to use
`server_names`	string-array		Read-only; hidden; expensive to use
`protocol`	string		Read-only; expensive to use.
`rights`	string-array		Read-only. List of rights the subject has to this object.
`created_at`	datetime		Read-only
`modified_at`	datetime		Read-only
`removed`	boolean		Read-only
`builtin`	boolean		Read-only; expensive to use; if `true`, the object is not editable.
`hidden`	boolean		Read-only; expensive to use; if `true`, the object is hidden in UI.

15.2 Retrieve Available Attributes of the *PoolModel*

Request

Method	`GET`
Path	`/api/v2/objspec/pool`

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

Refer to the *Batch operations* topic to create nested requests for operating on the Pool objects.

15.3 Get Pools List

Request

Method	`GET`
Path	`/api/v2/pool`

Example Request

GET /api/v2/pool

Response


```
    {
"result": "success",
"pool": [
    {
        "id": "1232678819172646913",
        "name": "Linux servers",
        "description": "Example Linux pool",
        "created_at": "2022-10-20 02:01:38.373501-07",
        "modified_at": "2022-10-20 02:01:38.373501-07",
        "servers": [
            "1202678819172646913"
        ]
    },
    {
        "id": "41232678819172646914",
        "name": "Windows servers",
        "description": "Example Windows pool",
        "created_at": "2022-10-20 02:01:38.376251-07",
        "modified_at": "2022-10-20 02:01:38.376251-07",
        "servers": [
            "1202678819172646914"
        ]
    },
    {
        "id": "1232678819172646915",
```


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```
        "name": "test-pool",
        "created_at": "2022-10-24 06:34:53.510281-07",
        "modified_at": "2022-10-24 06:34:53.510281-07",
        "servers": [
            "1202678819172646913"
        ]}]}
```

15.4 Get a Pool

Request

Method	`GET`
Path	`/api/v2/pool/<id>`

Example Request

GET /api/v2/pool/<id>

Response

```
    {
"result": "success",
"pool": {
    "id": "1232678819172646915",
    "name": "test-pool",
    "created_at": "2022-10-24 06:34:53.510281-07",
    "modified_at": "2022-10-24 06:34:53.510281-07",
    "servers": [
        "1202678819172646913"
    ]}}
```

15.5 Create a Pool

Request

Method	`POST`
Path	`/api/v2/pool`
Headers	`Content-Type: Application/json`
Body	`PoolModel`

Example Request

POST /api/v2/pool

```
{"name": "my-2nd-pool"}
```

Response

```
    { "result": "success",
"pool": {
    "id": "1202678819172646916" }}
```

15.6 Modify a Pool

Request

Method	`PATCH`
Path	`/api/v2/pool/<id>`
Headers	`Content-Type: Application/json`
Body	`PoolModel`

Example Request

PATCH /api/v2/pool/<id>

```
{"name": "my-cool-pool"}
```

Response

```
{ "result": "success" }
```

15.7 Deleting a Pool

Request

Method	`DELETE`
Path	`/api/v2/pool/<id>`

CHAPTER

SIXTEEN

API V2: POOL-SERVER ASSIGNMENT

16.1 Data Structures

Table 1: `ServerPoolModel`

Attribute	Type	Required	Description
`id`	string	yes	Read-only object identifier. Requires the following rights on object type `pool` depending on the HTTP method used: `GET` → `read`, `POST` → `server-add`, `DELETE` → `server-remove`.
`pool_id`	string	yes	Immutable. Uniqueness is required in the combination of attribute `pool_id` with attribute `server_id`.
`server_id`	string	yes	Immutable. Uniqueness is required in the combination of attribute `server_id` with attribute `pool_id`. Requires the following rights on object type `server` depending on the HTTP method used: `GET`, `POST`, `DELETE` → `read`.
`pool_name`	string		Read-only; Expensive to use.
`server_name`	string		Read-only; Expensive to use.
`server_protocol`	string		Read-only; Expensive to use.
`created_at`	datetime		Read-only.
`modified_at`	datetime		Read-only.
`removed`	boolean		Read-only.

16.2 Retrieve Available Attributes of the *ServerPoolModel*

Request

Method	`GET`
Path	`/api/v2/objspec/pool_server`

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

Refer to the *Batch operations* topic to create nested requests for operating on the Pool objects.

16.3 Get Pool-Server Assignment List

Request

Method	GET
Path	/api/v2/pool/server

Example Request

GET /api/v2/pool/server

Response


```
    {
"result": "success",
"pool_server": [
    {
        "pool_id": "1232678819172646913",
        "server_id": "1232678819172646913",
        "created_at": "2022-10-20 02:01:38.374809-07",
        "modified_at": "2022-10-20 02:01:38.374809-07"
    },
    {
        "pool_id": "1232678819172646914",
        "server_id": "1232678819172646914",
        "created_at": "2022-10-20 02:01:38.376536-07",
        "modified_at": "2022-10-20 02:01:38.376536-07"
    },
    {
        "pool_id": "1232678819172646915",
        "server_id": "1232678819172646913",
        "created_at": "2022-10-24 06:51:46.780733-07",
        "modified_at": "2022-10-24 06:51:46.780733-07"
    }]}
```


16.4 Get Pool-Server Assignment List by ID's

Request

Method	GET
Path	/api/v2/pool/<pool_id>/server/<server_id>

Example Request

GET /api/v2/pool/<pool_id>/server/<server_id>

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/pool/1232678819172646915/server/
↪1232678819172646913'
```

Response

```
    {
"result": "success",
"pool_server": [
    {
        "pool_id": "1232678819172646915",
        "server_id": "1232678819172646913",
        "created_at": "2022-10-24 06:51:46.780733-07",
        "modified_at": "2022-10-24 06:51:46.780733-07"
    }]}
```

16.5 Adding a Server to the Pool

Request

Method	POST
Path	/api/v2/pool/server
Headers	Content-Type: Application/json
Body	ServerPoolModel

Example Request

POST /api/v2/pool/server

```
    { "pool_id": "4602678819172646916",
"server_id": "4602678819172646914"}
```

Response

```
    { "result": "success",
"pool_server": {} }
```

16.6 Deleting a Server From a Pool

Request

Method	DELETE
Path	/api/v2/pool/<pool_id>/server/<server_id>

CHAPTER

SEVENTEEN

API V2: SAFES

Safe directly regulates user access to monitored servers. It specifies available protocols' features, policies and other details concerning users and servers relations.

17.1 Data Structures

Table 1: `SafeModel`

Attribute	Type	Required	Description
`id`	string	yes	Read-only object identifier. Requires the following rights on object type `safe` depending on the HTTP method used: `GET` → `read`, `PATCH` → `modify`, `DELETE` → `delete`.
`name`	string	yes	Unique safe's name
`blocked`	boolean; default value `false`	yes	
`reason`	string	if `blocked` == `true`	
`login_reason`	boolean; default value `false`	yes	Enable sending login reason for connection
`use_ticketing_system`	boolean; default value `false`	yes	
`require_confirmation`	boolean; default value `false`	yes	Enable confirmation of each connection
`otp_in_access_gateway`	boolean; default value `true`	yes	Enable generating OTP in the Access Gateway
`webclient`	boolean; default value `true`	if `fudo_network` == `true`	Enable connecting to the session in browser
`fudo_network`	boolean; default value `false`	yes	

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Table 1 – continued from previous page

Attribute	Type	Required	Description
`confirmation_timeout`	number; default value `5`	yes	
`inactivity_limit`	number; default value `0`	yes	
`time_limit`	number; default value `0`	yes	
`note_access`	string {none, read, write}; default value `none`	Access level to the notes	
`required_votes`	number; default value `0`	yes	How many voters will be voting for the access request
`backup_id`	string	no	Target destination ID for storing session data
`backup_name`	string	no	Read-only; expensive to use
`rdp`	SafeRDPAttributes	If `protocol == rdp`	
`ssh`	SafeSSHAttributes	If `protocol == ssh`	
`vnc`	SafeVNCAttributes	If `protocol == vnc`	
`rights`	string-array		Read-only. List of rights the subject has to this object.
`created_at`	datetime		Read-only
`modified_at`	datetime		Read-only
`removed`	boolean		Read-only
`last_login`	datetime		Read-only
`accounts`	object-array		Read-only; expensive to use; JSON object array containing `id`, `name`, and `type` of assigned accounts.
`account_ids`	string-array		Read-only; hidden; expensive to use
`account_names`	string-array		Read-only; hidden; expensive to use
`users`	object-array		Read-only; expensive to use
`user_ids`	string-array		Read-only; hidden; expensive to use
`user_names`	string-array		Read-only; hidden; expensive to use
`listeners`	object-array		Read-only; expensive to use
`listener_ids`	number-array		Read-only; hidden; expensive to use
`listener_names`	string-array		Read-only; hidden; expensive to use

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Table 1 – continued from previous page

Attribute	Type	Required	Description
`builtin`	boolean		Read-only; expensive to use; if `true`, the object is not editable.
`hidden`	boolean		Read-only; expensive to use; if `true`, the object is hidden in UI.

Table 2: `SafeRDPAttributes`

Attribute	Type	Required	Description
`rdp_audin`	boolean; default value `true`	yes	Audio input redirection
`rdp_cliprdr`	boolean; default value `true`	yes	Clipboard redirection
`rdp_config`	string		Custom content to be added to the RDP configuration file when the native client RDP connection is requested via Access Gateway.
`rdp_depth`	number {8, 16, 24, 32}	no	Max. color depth
`rdp_rdpdr`	boolean; default value `true`	yes	
`rdp_rdpsnd`	boolean; default value `true`	yes	Sound redirection
`rdp_rdrynvc`	boolean; default value `true`	yes	
`rdp_resolution`	string {800x600, 1024x600, 1024x768, 1152x864, 1280x720, 1280x768, 1280x800, 1280x960, 1280x1024, 1360x768, 1400x1050, 1440x900, 1600x900, 1680x1050, 1600x1200, 1920x1080, 1920x1200, 2048x1152, 2560x1440, 2560x1600}	no	Max. resolution
`rdp_suspend`	boolean; default value `true`	yes	Enable content to not be available for viewing when the user minimizes its client application
`rdp_tsmf`	boolean; default value `true`	yes	

Table 3: `SafeSSHAttributes`

Attribute	Type	Required
`ssh_agent`	boolean; default value `true`	yes
`ssh_environment`	boolean; default value `true`	yes
`ssh_exec`	boolean; default value `true`	yes
`ssh_port_forwarding`	boolean; default value `true`	yes
`ssh_record_file_transfer`	boolean; default value `true`	yes
`ssh_record_port_forwardin`	boolean; default value `true`	yes
`ssh_scp`	boolean; default value `true`	yes
`ssh_session`	boolean; default value `true`	yes
`ssh_shell`	boolean; default value `true`	yes
`ssh_sftp`	boolean; default value `true`	yes
`ssh_terminal`	boolean; default value `true`	yes
`ssh_x11`	boolean; default value `true`	yes

Table 4: `SafeVNCAttributes`

Attribute	Type	Required	Description
`vnc_clipcli`	boolean; default value `true`	yes	Enable a user to be allowed to paste text into the VNC server computer
`vnc_clipsrv`	boolean; default value `true`	yes	Enable a user to be allowed to copy and paste text from the VNC server computer into the user's computer

17.2 Get Available Attributes of the `SafeModel`

Request

Method	`GET`
Path	`/api/v2/objspec/safe`

17.3 Data Structures: *UserSafeAssignmentModel*

Table 5: `UserSafeAssignmentModel`

Attribute	Type	Required	Description
`id`	string	yes	Read-only object Identifier.
`user_id`	string	yes	Immutable. Uniqueness is required in the combination of attribute `user_id` with attribute `safe_id`. Requires `read` right on object type `user` for `GET`, `POST`, `PATCH`, and `DELETE` requests.
`roles`	object-array		Read-only. Expensive to use.

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Table 5 – continued from previous page

Attribute	Type	Required	Description
`role_names`	string-array		Read-only. Hidden. Expensive to use.
`role_ids`	string-array		Read-only. Hidden. Expensive to use.
`safe_id`	string	yes	Immutable. Uniqueness is required in the combination of attribute `safe_id` with attribute `user_id`. Requires `read` right on object type `safe` for `GET` and `PATCH` requests, `user-add` right for `POST`, and `user-remove` right for `DELETE` requests.
`blocked`	boolean; default value `false`	yes	Access to this safe is disabled for the user.
`position`	number		
`password_visible`	boolean; default value `false`	yes	Allow a user to use Secret Checkout feature and view passwords in the Access Gateway.
`time_policy_che`	string		Read-only; Expensive to use. Checksum computed from time policies used for this user-safe connection.
`use_time_policy`	boolean; default value `false`	yes	
`valid_since`	datetime (h:m:s); default value `-infinity`	yes	Beginning access time.
`valid_to`	datetime (h:m:s); default value `infinity`	yes	Ending access time.
`user_name`	string		Read-only; Expensive to use.
`user_domain`	string		Read-only; Expensive to use.
`user_email`	string		Read-only; Expensive to use.
`user_organizatic`	string		Read-only; Expensive to use.
`user_domain`	string		Read-only; Expensive to use.
`safe_name`	string		Read-only; Expensive to use.
`created_at`	datetime		Read-only.
`modified_at`	datetime		Read-only.
`removed`	boolean		Read-only.
`builtin`	boolean		Read-only; Expensive to use; If `true`, the object is not editable.
`hidden`	boolean		Read-only; Expensive to use; If `true`, the object is hidden in UI.

17.4 Retrieve Available Attributes of the *UserSafeAssignmentModel*

Request

Method	`GET`
Path	`/api/v2/objspec/user_safe`

17.5 Data Structures: *UserSafeTimePolicyAssignmentModel*

Table 6: `UserSafeTimePolicyAssignmentModel`

Attribute	Type	Required	Description
`id`	string	yes	Read-only object Identifier.
`user_safe_id`	string		Read-only object Identifier.
`user_id`	string	yes	Immutable. Requires `read` right on object type `user` for `GET` requests, and `modify` right for `POST`, `PATCH`, and `DELETE` requests.
`safe_id`	string	yes	Immutable. Requires `read` right on object type `safe` for `GET`, `POST`, and `PATCH` requests.
`user_name`	string		Read-only; Expensive to use.
`user_role`	string		Read-only; Expensive to use.
`safe_name`	string		Read-only; Expensive to use.
`day_of_week`	number	yes	Value range from `1` to `7`.
`valid_from`	datetime (h:m:s)	yes	Beginning access time.
`valid_to`	datetime (h:m:s)	yes	Ending access time.
`created_at`	datetime		Read-only.
`modified_at`	datetime		Read-only.
`removed`	boolean		Read-only.

17.6 Retrieve Available Attributes of the *UserSafeTimePolicy - AssignmentModel*

Request

Method	`GET`
Path	`/api/v2/objspec/user_safe_time_policy`

Table 7: `SafePolicyAssignmentModel`

Attribute	Type	Required	Description
`id`	string	yes	Read-only, protected object Identifier
`safe_id`	string	yes	Immutable. Uniqueness is required in the combination of attribute `safe_id` with attributes `policy_id`. Requires `read` right on object type `safe` for `GET` requests, and `modify` right for `DELETE` and `POST` requests.
`policy_id`	string	no	Immutable. Uniqueness is required in the combination of attribute `policy_id` with attributes `safe_id`.
`safe_name`	string		Read-only; expensive to use
`policy_name`	string		Read-only; expensive to use
`created_at`	datetime		Read-only. Timestamp of creation.
`modified_at`	datetime		Read-only. Timestamp of modification.
`removed`	boolean		Read-only.

17.7 Retrieve Available Attributes of the *SafePolicyAssignmentModel*

Request

Method	`GET`
Path	`/api/v2/objspec/safe_policy`

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

Refer to the *Batch operations* topic to create nested requests for operating on the Safe objects.

17.8 Get Safes List

Request

Method	`GET`
Path	`/api/v2/safe`

Example Request

GET /api/v2/safe

Response

```
   { "result": "success",
"safe": [
   {
       "id": "123678819172646913",
```

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```
        "name": "main",
        "blocked": false,
        "login_reason": false,
        "use_ticketing_system": false,
        "require_confirmation": false,
        "otp_in_access_gateway": true,
        "webclient": true,
        "confirmation_timeout": 5,
        "inactivity_limit": 0,
        "time_limit": 0,
        "note_access": "none",
        "required_votes": 0,
        "rdp_audin": true,
        "rdp_cliprdr": true,
        "rdp_rdpdr": true,
        "rdp_rdpsnd": true,
        "rdp_rdrynvc": true,
        "rdp_suspend": true,
        "rdp_tsmf": true,
        "ssh_agent": true,
        "ssh_environment": true,
        "ssh_exec": true,
        "ssh_port_forwarding": true,
        "ssh_scp": true,
        "ssh_session": true,
        "ssh_shell": true,
        "ssh_sftp": true,
        "ssh_terminal": true,
        "ssh_x11": true,
        "vnc_clipcli": true,
        "vnc_clipsrv": true,
        "created_at": "2022-10-20 02:01:38.366865-07",
        "modified_at": "2022-10-26 03:26:45.530129-07",
        "last_login": "-infinity",
        "accounts": [
            "1226788191726469 13",
            "12326788191726469 14",
            "12326788191726469 19"
        ]}]}
```


17.9 Create a Safe

Request

Method	`POST`
Path	`/api/v2/safe`
Headers	`Content-Type: Application/json`
Body	`SafeModel`

Example Request

POST /api/v2/safe

```
{ "name": "my-1st-safe" }
```

Response

```
    { "result": "success",
"safe": {
    "id": "1232678819172646915" }}
```

17.10 Get a Safe

Request

Method	GET
Path	/api/v2/safe/<id>

Example Request

GET /api/v2/safe/<id>

Response

```
    { "result": "success",
"safe": {
    "id": "1232678819172646915",
    "name": "my-1st-safe",
    "blocked": false,
    "login_reason": false,
    "use_ticketing_system": false,
    "require_confirmation": false,
    "otp_in_access_gateway": true,
    "webclient": true,
    "confirmation_timeout": 5,
    "inactivity_limit": 0,
    "time_limit": 0,
    "note_access": "none",
    "required_votes": 0,
    "rdp_audin": true,
    "rdp_cliprdr": true,
    "rdp_rdpdr": true,
    "rdp_rdpsnd": true,
    "rdp_rdrynvc": true,
    "rdp_suspend": true,
    "rdp_tsmf": true,
    "ssh_agent": true,
    "ssh_environment": true,
    "ssh_exec": true,
    "ssh_port_forwarding": true,
```

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```
    "ssh_scp": true,
    "ssh_session": true,
    "ssh_shell": true,
    "ssh_sftp": true,
    "ssh_terminal": true,
    "ssh_x11": true,
    "vnc_clipcli": true,
    "vnc_clipsrv": true,
    "created_at": "2022-10-27 02:26:22.951762-07",
    "modified_at": "2022-10-27 02:26:22.951762-07",
    "last_login": "-infinity" }}
```

17.11 Modify a Safe

Request

Method	`PATCH`
Path	`/api/v2/safe/<id>`
Headers	`Content-Type: Application/json`
Body	`SafeModel`

Example Request: Enabling the Just-in-Time Feature for a Safe That Would Wait for 5 Authorized Users to Vote for Access

PATCH /api/v2/safe/<id>

```
{ "required_votes": 5}
```

Response

```
{ "result": "success" }
```

17.12 Delete a Safe

Request

Method	`DELETE`
Path	`/api/v2/safe/<id>`

17.13 Get Users' Time Policy Settings Within Safes

Request

Method	`GET`
Path	`/api/v2/user/safe/time_policy`

Example Request

GET /api/v2/user/safe/time_policy

Response (User's time policy is declared separately for each day)

```
    {
"result": "success",
"user_safe_time_policy": [
    {
        "id": "4602678819172646913",
        "safe_id": "4602678819172646913",
        "user_id": "1232678819172646915",
        "day_of_week": 2, <--- A user has access to the safe on Tuesday
        "valid_from": "09:00:00", <--- User's access starts at 9:00
        "valid_to": "14:00:00", <--- and ends at 14:00
        "created_at": "2022-10-26 02:25:19.155648-07",
        "modified_at": "2022-10-26 02:30:40.677788-07"
    },
    {
        "id": "4602678819172646914",
        "safe_id": "4602678819172646913",
        "user_id": "1232678819172646915",
        "day_of_week": 3, <--- A user has access to the safe on Wednesday
        "valid_from": "09:15:00", <--- User's access starts at 9:15
        "valid_to": "14:15:00", <--- and ends at 14:15
        "created_at": "2022-10-26 02:32:11.781045-07",
        "modified_at": "2022-10-26 02:32:11.781045-07"
    }]}
```

17.14 Modify a User's Time Policy Settings Within a Safe

Request

Method	PATCH
Path	/api/v2/user/safe/time_policy/<id>
Body	UserSafeTimePolicyAssignment

Example Request: Changing the Day of User's Access to Monday

PATCH /api/v2/user/safe/time_policy/<id>

```
{ "day_of_week": 1}
```

Response

```
{ "result": "success" }
```

17.15 Get User's Settings Within a Safe

Request

Method	GET
Path	/api/v2/user/<user_id>/safe/<safe_id>

17.16 Modify a User Within a Safe

Request

Method	PATCH
Path	/api/v2/user/<user_id>/safe/<safe_id>
Body	UserSafeAssignment

Example Request: Allow a User to Use Secret Checkout Feature and View Passwords in the Access Gateway

PATCH /api/v2/user/<user_id>/safe/<safe_id>

```
{"password_visible": true}
```

Response

```
{ "result": "success" }
```

17.17 Delete a User From a Safe

Request

Method	DELETE
Path	/api/v2/user/<user_id>/safe/<safe_id>

17.18 Get Users Allowed to Manage Selected Safe

Request

Method	GET
Path	/api/v2/user/safe

17.19 Get Account-Safe-Listener Assignments List

Request

Method	GET
Path	/api/v2/account/safe/listener

17.20 Create an Account-Safe-Listener Assignments

Request

Method	POST
Path	/api/v2/account/safe/listener
Headers	Content-Type: Application/json
Body	AccountSafeListenerAssignmentModel

Example Request

POST /api/v2/account/safe/listener

```
   { "account_id": 1232678819172646919,
"safe_id": 1232678819172646913,
"listener_id": 1232678819172646914 }
```

Response

```
   { "result": "success",
"account_safe_listener": {} }
```

17.21 Delete an Account-Safe-Listener Assignment

Request

Method	DELETE
Path	/api/v2/account/<account_id>/safe/<safe_id>/listener/<listener_id>

17.22 Get Safe-Policy Assignments List

Request

Method	GET
Path	/api/v2/safe/policy

Example Request

GET /api/v2/safe/policy/

```
curl -s -k -X GET -H 'Authorization: sgfeea6jsaz4mum9su8w61877n1g06sk' /api/v2/
↪safe/policy
```

Response

```
{
    "result": "success",
```

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```
    "safe_policy": [
        {
            "safe_id": "9124292845052624898",
            "policy_id": "9124292845052624898",
            "safe_name": "RDP_Safe",
            "policy_name": "AI_Policy_1",
            "created_at": "2024-06-21 06:15:12.135699-07",
            "modified_at": "2024-06-21 06:15:12.135699-07"
        }
    ]
}
```


17.23 Checking Safe-Policy Assignment by ID

Request

Method	`GET`
Path	`/api/v2/safe/<safe_id>/policy/<policy_id>`
Headers	`Content-Type: Application/json`
Body	`PolicyModel`

Example Request

GET /api/v2/safe/<safe_id>/policy/<policy_id>

```
curl -s -k -X GET -H 'Authorization: sgfeea6jsaz4mum9su8w61877n1g06sk' /api/v2/
↪safe/9124292845052624898/policy/9124292845052624898
```

Response


```
{
    "result": "success",
    "safe_policy": [
        {
            "safe_id": "9124292845052624898",
            "policy_id": "9124292845052624898",
            "safe_name": "RDP_Safe",
            "policy_name": "AI_Policy_1",
            "created_at": "2024-06-21 06:15:12.135699-07",
            "modified_at": "2024-06-21 06:15:12.135699-07"
        }
    ]
}
```

17.24 Create an Safe-Policy Assignments

Request

Method	`POST`
Path	`/api/v2/safe/policy`
Headers	`Content-Type: Application/json`
Body	`SafePolicyAssignmentModel`

Example Request

POST /api/v2/safe/policy

```
curl -s -k -X POST -H 'Authorization: sgfeea6jsaz4mum9su8w61877n1g06sk' /api/v2/
↪safe/policy \
-H 'Content-Type: application/json' \
-d '{"safe_id":"9124292845052624898","policy_id":"9124292845052624898"}'
```

Response

```
{
    "result": "success"
}
```

17.25 Delete a Safe-Policy Assignment

Request

Method	`DELETE`
Path	`/api/v2/safe/<safe_id>/policy/<policy_id>`

Example Request

DELETE /api/v2/safe/<safe_id>/policy/<policy_id>

```
curl -s -k -X DELETE -H 'Authorization: sgfeea6jsaz4mum9su8w61877n1g06sk' /api/
↪v2/safe/9124292845052624898/policy/9124292845052624898
```

Response

```
{
    "result": "success"
}
```

CHAPTER

EIGHTEEN

API V2: DISCOVERY NEW

The *Discovery* feature is able to search for accounts with different privilege levels on domain controllers, servers on domain controllers, and local accounts on Windows servers.

The Discovery function needs two objects to provide the most efficient results:

1. A *scanner* with configuration of the target server and an account to connect, and a schedule for running the scanner automatically.
2. A *rule* to specify what the scanner should do in terms of its discovery.

18.1 Discovery Scanner NEW

18.1.1 Data Structures

Table 1: `DiscoveryScannerModel`

Attribute	Type	Required	Description
`id`	string		Read-only. Unique identifier.
`name`	string	yes	Case-insensitive. Unique.
`description`	string		
`type`	string {ldap_accour ldap_server, lo- cal_account}	yes	
`pool_id`	string	if `type` == `ldap_acco` || `ldap_serv`	Requires `read` right on the `pool` object for GET, POST, PATCH, and DELETE requests.
`server_id`	string	if `type` == `ldap_acco` || `ldap_serv`	Requires `read` right on the `server` object for GET, POST, PATCH, and DELETE requests.
`account_id`	string	yes	Requires `read` right on the `account` object for GET, POST, PATCH, and DELETE requests.
`enabled`	boolean; de- fault value `false`	yes	
`category`	string {priv- ileged, nonpriv- ileged, all}	if `type` == `ldap_acco`	
`filter_base`	string	if `type` == `ldap_acco` || `ldap_serv`	
`filter_group`	string	if `type` == `ldap_acco` || `ldap_serv`	
`server_tls_ca_`	string	if `type` == `ldap_serv`	
`schedule_dow`	number {1 - 7}	with `schedule_`	Schedule day of week. Value-range: 1 to 7.
`schedule_time`	string	with `schedule_`	
`last_scan`	string		Read-only. Timestamp of the last scan.
`next_scan`	string		Read-only. Timestamp of the next scan.
`next_manual_sc`	string		Read-only. Timestamp of the next manual scan.
`password_chang`	string	if `type` == `ldap_acco`	

18.1.2 Retrieve Available Attributes of the *DiscoveryScannerModel*

Request

Method	`GET`
Path	`/api/v2/objspec/scanner`

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

18.1.3 Get Scanners List

Request

Method	`GET`
Path	`/api/v2/scanner`

Example Request

GET /api/v2/scanner`

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/scanner'
```

Response


```
{
    "result": "success",
    "scanner": [
        {
            "id": "5620492334958379009",
            "name": "LDAP_scanner",
            "type": "ldap_account",
            "pool_id": "5620492334958379010",
            "server_id": "5620492334958379011",
            "account_id": "5620492334958379011",
            "enabled": true,
            "category": "nonprivileged",
                        "schedule_dow": 1,
                        "schedule_time": "23:00:00-07",
            "last_scan": "-infinity",
            "next_scan": "infinity",
                        "next_manual_scan": "infinity",
            "connection_port": 636,
            "created_at": "2024-06-24 04:25:40.966955-07",
            "modified_at": "2024-06-24 04:25:40.966955-07"
        }
    ]
}
```

18.1.4 Get Scanner by ID

Request

Method	GET
Path	/api/v2/scanner/<id>

Example Request

GET /api/v2/scanner/<id>`

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/scanner/5620492334958379009'
```

Response


```
{
    "result": "success",
    "scanner": [
        {
            "id": "5620492334958379009",
            "name": "LDAP_scanner",
            "type": "ldap_account",
            "pool_id": "5620492334958379010",
            "server_id": "5620492334958379011",
            "account_id": "5620492334958379011",
            "enabled": true,
            "category": "nonprivileged",
                        "schedule_dow": 1,
                        "schedule_time": "23:00:00-07",
            "last_scan": "-infinity",
            "next_scan": "infinity",
                        "next_manual_scan": "infinity",
            "connection_port": 636,
            "created_at": "2024-06-24 04:25:40.966955-07",
            "modified_at": "2024-06-24 04:25:40.966955-07"
        }
    ]
}
```


18.1.5 Create Scanner

Request

Method	POST
Path	/api/v2/scanner
Headers	Content-Type: Application/json
Body	DiscoveryScannerModel

Example Request

POST /api/v2/scanner`

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/scanner' \
  -d'{"name":"LDAP_Scanner","type":"ldap_account","pool_id":"5620492334958379010
↪","server_id":"5620492334958379011","account_id":"5620492334958379011",
↪"enabled":false,"category":"nonprivileged","connection_port": 636}'
```

Response

```
{
    "result": "success",
    "scanner": {
        "id": "5620492334958379010"
    }
}
```

18.1.6 Modify Scanner

Request

Method	PATCH
Path	/api/v2/scanner/<id>
Headers	Content-Type: Application/json
Body	DiscoveryScannerModel

Example Request

PATCH /api/v2/scanner/<id>`

```
curl -s -k -X PATCH \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/scanner/5620492334958379010' \
  -d'{"category":"privileged"}'
```

Response

```
{
    "result": "success"
}
```

18.1.7 Starting Scan

Request

Method	POST
Path	/api/v2//scanner/<scanner_id>/start

Example Request

POST /api/v2/scanner/<id>/start`

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/scanner/5620492334958379010/start'
```

Response

```
{
    "result": "success",
    "next_manual_scan": "2025-05-05 01:53:54.923673-07"
}
```

18.1.8 Deleting Scanner

Request

Method	DELETE
Path	/api/v2/scanner/<id>

Example Request

DELETE /api/v2/scanner/<id>`

```
curl -s -k -X DELETE \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/scanner/5620492334958379010'
```

Response

```
{
    "result": "success"
}
```

18.2 Discovery Rule NEW

18.2.1 Data Structures

Table 2: `DiscoveryRuleModel`

Attribute	Type	Required	Description
`id`	string		Read-only. Unique identifier.
`name`	string	yes	Case-insensitive. Unique.
`description`	string		
`type`	string {account, server}	yes	
`enabled`	boolean; default value `true`	yes	
`category`	string {privileged, nonprivileged, all}		
`action`	string{onboar quarantine}	yes	
`filter_type`	string{consist ends_with, starts_with}	with `filter_va`	
`filter_value`	string	with `filter_ty`	
`scanners`	object-array		Read-only; expensive to use.
`scanner_ids`	string-array		Read-only; expensive to use; hidden.
`scanner_names`	string-array		Read-only; expensive to use; hidden.
`created_at`	datetime		Read-only. Timestamp of creation.
`modified_at`	datetime		Read-only. Timestamp of modification.
`removed`	boolean		Read-only.
`builtin`	boolean		Read-only; Expensive to use; If `true`, the object is not editable.
`hidden`	boolean		Read-only; Expensive to use; If `true`, the object is hidden in UI.

18.3 Retrieve Available Attributes of the *DiscoveryRuleModel*

Request

Method	`GET`
Path	`/api/v2/objspec/rule`

GET /api/v2/objspec/rule

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

18.4 Get Rules List

Request

Method	GET
Path	/api/v2/discovery/rule

GET /api/v2/discovery/rule

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/discovery/rule'
```

Response


```
{
    "result": "success",
    "rule": [
        {
            "id": "9115285645797883905",
            "name": "Rule_1",
            "type": "account",
            "enabled": true,
            "category": "privileged",
            "action": "onboard",
            "filter_type": "starts_with",
            "filter_value": "admin",
            "created_at": "2025-05-06 00:27:11.928953-07",
            "modified_at": "2025-05-06 00:27:11.928953-07",
            "builtin": false,
            "hidden": false
        }
    ]
}
```


18.5 Get Rule by ID

Request

Method	GET
Path	/api/v2/discovery/rule

GET /api/v2/discovery/rule/<id>

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/discovery/rule/9115285645797883905'
```

Response


```
{
    "result": "success",
    "rule": [
        {
            "id": "9115285645797883905",
            "name": "Rule_1",
            "type": "account",
            "enabled": true,
            "category": "privileged",
            "action": "onboard",
            "filter_type": "starts_with",
            "filter_value": "admin",
            "created_at": "2025-05-06 00:27:11.928953-07",
            "modified_at": "2025-05-06 00:27:11.928953-07",
            "builtin": false,
            "hidden": false
        }
    ]
}
```


18.6 Create Rule

Request

Method	`POST`
Path	`/api/v2/discovery/rule`
Headers	`Content-Type: application/json`
Body	`DiscoveryRuleModel`

POST /api/v2/discovery/rule

Example Request

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/discovery/rule' \
  -d'{"name": "Rule_2","type": "account","enabled": true,"category": "privileged
↪","action": "onboard","filter_type": "starts_with","filter_value": "admin"}'
```

Response

```
{
    "result": "success",
    "rule": {
        "id": "9115285645797883906"
    }
}
```

18.7 Modify Rule

Request

Method	PATCH
Path	/api/v2/discovery/rule/<id>
Headers	Content-Type: application/json
Body	DiscoveryRuleModel

PATCH /api/v2/discovery/rule/<id>

Example Request

```
curl -s -k -X PATCH \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/scanner/9115285645797883906' \
  -d'{"action":"quarantine","filter_type":"starts_with","filter_value":"fudo_
↪admin"}'
```

Response

```
{
    "result": "success"
}
```

18.8 Delete Rule

Request

Method	DELETE
Path	/api/v2/discovery/rule/<id>

DELETE /api/v2/discovery/rule/<id>

Example Request

```
curl -s -k -X DELETE \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/discovery/rule/9115285645797883906'
```

Response

```
{
    "result": "success"
}
```

18.9 Discovery Scanner-Rule Assignment NEW

18.9.1 Data Structures

Table 3: `DiscoveryScannerRuleModel`

Attribute	Type	Required	Description
`id`	string		Read-only. Protected.
`scanner_id`	string	yes	Immutable. Uniqueness is required in the combination of attribute `scanner_id` with attribute `rule_id`.
`rule_id`	string	yes	Immutable. Uniqueness is required in the combination of attribute `rule_id` with attribute `scanner_id`.
`position`	number		
`scanner_name`	string		Read-only; Expensive to use.
`rule_name`	string		Read-only; Expensive to use.
`created_at`	datetime		Read-only. Timestamp of creation.
`modified_at`	datetime		Read-only. Timestamp of modification.
`removed`	boolean		Read-only.

18.9.2 Retrieve Available Attributes of the *DiscoveryScannerRuleModel*

Request

Method	`GET`
Path	`/api/v2/objspec/scanner_rule`

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

18.9.3 Get List of Scanner-Rule Assignment

Request

Method	`GET`
Path	`/api/v2/scanner/rule`

Example Request

GET /api/v2/scanner/rule`

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/scanner/rule'
```

Response


```
{
    "result": "success",
    "scanner_rule": [
        {
            "scanner_id": "9115285645797883907",
            "rule_id": "9115285645797883905",
            "position": 0,
            "scanner_name": "LDAP_Scanner",
            "rule_name": "Rule_1",
            "created_at": "2025-05-06 02:58:54.21643-07",
            "modified_at": "2025-05-06 02:58:54.21643-07"
        },
        {
            "scanner_id": "9115285645797883907",
            "rule_id": "9115285645797883906",
            "position": 1,
            "scanner_name": "LDAP_Scanner",
            "rule_name": "Rule_2",
            "created_at": "2025-05-06 02:58:54.227576-07",
            "modified_at": "2025-05-06 02:58:54.227576-07"
        }
    ]
}
```


18.9.4 Get Scanner-Rule Assignment by ID

Request

Method	`GET`
Path	`/api/v2/scanner/<scanner_id>/rule/<rule_id>`

Example Request

GET /api/v2/discovery/scanner/<id>/rule/<id>`

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/scanner/9115285645797883907/rule/
↪9115285645797883906'
```

Response


```
{
    "result": "success",
```


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```
    "scanner_rule": [
        {
            "scanner_id": "9115285645797883907",
            "rule_id": "9115285645797883906",
            "position": 1,
            "scanner_name": "LDAP_Scanner",
            "rule_name": "Rule_2",
            "created_at": "2025-05-06 02:58:54.227576-07",
            "modified_at": "2025-05-06 02:58:54.227576-07"
        }
    ]
}
```


18.9.5 Create Scanner-Rule Assignment

Request

Method	`POST`
Path	`/api/v2/scanner/rule`
Headers	`Content-Type: Application/json`
Body	`DiscoveryScannerRuleModel`

Example Request

POST /api/v2/scanner/rule`

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/scanner/rule' \
  -d'{"scanner_id":"9115285645797883907","rule_id":"9115285645797883908"}'
```

Response


```
{
    "result": "success"
}
```


18.9.6 Modify Scanner–Rule Assignment Attributes

Request

Method	`PATCH`
Path	`/api/v2/scanner/<scanner_id>/rule/<rule_id>`
Headers	`Content-Type: Application/json`
Body	`GroupSafeModel`

PATCH /api/v2/scanner/<scanner_id>/rule/<rule_id>

Example Request

```
curl -s -k -X PATCH \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.31.87.227/api/v2/scanner/9115285645797883907/rule/
↪9115285645797883908' \
  -d'{"position": 1}'
```

Response

```
{
    "result": "success"
}
```

18.9.7 Deleting Scanner-Rule Assignment

Request

Method	DELETE
Path	/api/v2/scanner/<scanner_id>/rule/<rule_id>

Example Request

DELETE /api/v2/scanner/<id>/rule/<id>`

```
curl -s -k -X DELETE \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/scanner/9115285645797883907/rule/
↪9115285645797883908'
```

Response

```
{
    "result": "success"
}
```

18.10 Discovery Rule-Listener Assignment NEW

18.10.1 Data Structures

Table 4: `DiscoveryRuleListenerModel`

Attribute	Type	Required	Description
`id`	string		Read-only. Protected.
`rule_id`	string	yes	Immutable. Uniqueness is required in the combination of attribute `rule_id` with attribute `listener_id`.
`listener_id`	string	yes	Immutable. Uniqueness is required in the combination of attribute `listener_id` with attribute `rule_id`.
`rule_name`	string		Read-only; Expensive to use.
`listener_name`	string		Read-only; Expensive to use.
`created_at`	datetime		Read-only. Timestamp of creation.
`modified_at`	datetime		Read-only. Timestamp of modification.
`removed`	boolean		Read-only.

18.10.2 Retrieve Available Attributes of the *DiscoveryRuleListenerModel*

Request

Method	`GET`
Path	`/api/v2/objspec/rule_listener`

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

18.10.3 Get List of Rule-Listener Assignment

Request

Method	`GET`
Path	`/api/v2/discovery/rule/listener`

Example Request

GET /api/v2/discovery/rule/listener`

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/discovery/rule/listener'
```

Response

```
{
    "result": "success",
    "rule_listener": [
```

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```
        {
            "rule_id": "9115285645797883905",
            "listener_id": "9115285645797883906",
            "rule_name": "Rule_1",
            "listener_name": "RDP:bastion",
            "created_at": "2025-05-06 00:27:11.982267-07",
            "modified_at": "2025-05-06 00:27:11.982267-07"
        }
    ]
}
```


18.10.4 Get Rule-Listener Assignment by ID

Request

Method	GET
Path	/api/v2/discovery/rule/<rule_id>/listener/<listener_id>

Example Request

GET /api/v2/discovery/rule/<id>/listener/<id>`

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/discovery/rule/9115285645797883905/listener/
↪9115285645797883906'
```

Response


```
{
    "result": "success",
    "rule_listener": [
        {
            "rule_id": "9115285645797883905",
            "listener_id": "9115285645797883906",
            "rule_name": "Rule_1",
            "listener_name": "RDP:bastion",
            "created_at": "2025-05-06 00:27:11.982267-07",
            "modified_at": "2025-05-06 00:27:11.982267-07"
        }
    ]
}
```


18.10.5 Create Rule-Listener Assignment

Request

Method	POST
Path	/api/v2/discovery/rule/listener
Headers	Content-Type: Application/json
Body	DiscoveryRuleListenerModel

Example Request

POST /api/v2/discovery/rule/listener`

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/discovery/rule/listener' \
  -d'{"rule_id":"9115285645797883906","listener_id":"9115285645797883906"}'
```

Response

```
{
    "result": "success",
    "rule": {
        "id": "9115285645797883906"
    }
}
```

18.10.6 Deleting Rule-Listener Assignment

Request

Method	DELETE
Path	/api/v2/discovery/rule/<rule_id>/listener/<listener_id>

Example Request

DELETE /api/v2/discovery/rule/<id>/listener/<id>`

```
curl -s -k -X DELETE \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/discovery/rule/9115285645797883906/listener/
↪9115285645797883906'
```

Response

```
{
    "result": "success"
}
```

18.11 Discovery Rule-Pool Assignment NEW

18.11.1 Data Structures

Table 5: `DiscoveryRulePoolModel`

Attribute	Type	Required	Description
`id`	string		Read-only. Protected.
`rule_id`	string	yes	Immutable. Uniqueness is required in the combination of attribute `rule_id` with attribute `pool_id`.
`pool_id`	string	yes	Immutable. Uniqueness is required in the combination of attribute `pool_id` with attribute `rule_id`.
`rule_name`	string		Read-only; Expensive to use.
`pool_name`	string		Read-only; Expensive to use.
`created_at`	datetime		Read-only. Timestamp of creation.
`modified_at`	datetime		Read-only. Timestamp of modification.
`removed`	boolean		Read-only.

18.11.2 Retrieve Available Attributes of the *DiscoveryRulePoolModel*

Request

Method	`GET`
Path	`/api/v2/objspec/rule_pool`

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

18.11.3 Get List of Rule-Pool Assignment

Request

Method	`GET`
Path	`/api/v2/discovery/rule/pool`

Example Request

GET /api/v2/discovery/rule/pool`

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/discovery/rule/pool'
```

Response

```
{
    "result": "success",
    "rule_pool": [
```

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```
        {
            "rule_id": "9115285645797883905",
            "pool_id": "9115285645797883906",
            "rule_name": "Rule_1",
            "pool_name": "RDP:bastion",
            "created_at": "2025-05-06 00:27:11.982267-07",
            "modified_at": "2025-05-06 00:27:11.982267-07"
        }
    ]
}
```


18.11.4 Get Rule-Pool Assignment by ID

Request

Method	`GET`
Path	`/api/v2/discovery/rule/<rule_id>/pool/<pool_id>`

Example Request

GET /api/v2/discovery/rule/<id>/pool/<id>`

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/discovery/rule/9115285645797883906/pool/
↪9115285645797883908'
```

Response


```
{
    "result": "success",
    "rule_pool": {
        "rule_id": "9115285645797883906",
        "pool_id": "9115285645797883908",
        "rule_name": "Rule_2",
        "pool_name": "Pool_RDP",
        "created_at": "2025-05-06 02:34:44.062332-07",
        "modified_at": "2025-05-06 02:34:44.062332-07"
    }
}
```


18.11.5 Create Rule-Pool Assignment

Request

Method	`POST`
Path	`/api/v2/discovery/rule/pool`
Headers	`Content-Type: Application/json`
Body	`DiscoveryRulePoolModel`

Example Request

POST /api/v2/discovery/rule/pool`

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/discovery/rule/pool' \
  -d'{"rule_id":"9115285645797883906","pool_id":"9115285645797883908"}'
```

Response

```
{
    "result": "success"
}
```

18.11.6 Deleting Rule-Pool Assignment

Request

Method	DELETE
Path	/api/v2/discovery/rule/<rule_id>/pool/<pool_id>

Example Request

DELETE /api/v2/discovery/rule/<id>/pool/<id>`

```
curl -s -k -X DELETE \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/discovery/rule/9115285645797883906/pool/
↪9115285645797883908'
```

Response

```
{
    "result": "success"
}
```

18.12 Discovery Rule-Safe Assignment NEW

18.12.1 Data Structures

Table 6: `DiscoveryRuleSafeModel`

Attribute	Type	Required	Description
`id`	string		Read-only. Protected.
`rule_id`	string	yes	Immutable. Uniqueness is required in the combination of attribute `rule_id` with attribute `safe_id`.
`safe_id`	string	yes	Immutable. Uniqueness is required in the combination of attribute `safe_id` with attribute `rule_id`. Requires `read` right on the `safe` object for GET, POST, and DELETE requests.
`rule_name`	string		Read-only; Expensive to use.
`safe_name`	string		Read-only; Expensive to use.
`created_at`	datetime		Read-only. Timestamp of creation.
`modified_at`	datetime		Read-only. Timestamp of modification.
`removed`	boolean		Read-only.

18.12.2 Retrieve Available Attributes of the *DiscoveryRuleSafeModel*

Request

Method	`GET`
Path	`/api/v2/objspec/rule_safe`

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

18.12.3 Get List of Rule-Safe Assignment

Request

Method	`GET`
Path	`/api/v2/discovery/rule/safe`

Example Request

GET /api/v2/discovery/rule/safe`

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/discovery/rule/safe'
```

Response

```
{
    "result": "success",
```

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```
    "rule_safe": [
        {
            "rule_id": "9115285645797883905",
            "safe_id": "9115285645797883906",
            "rule_name": "Rule_1",
            "safe_name": "RDP",
            "created_at": "2025-05-06 00:27:11.974136-07",
            "modified_at": "2025-05-06 00:27:11.974136-07"
        }
    ]
}
```


18.12.4 Get Rule-Safe Assignment by ID

Request

Method	GET
Path	/api/v2/discovery/rule/<rule_id>/safe/<safe_id>

Example Request

GET /api/v2/discovery/rule/<id>/safe/<id>`

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/discovery/rule/9115285645797883906/safe/
↪9115285645797883906'
```

Response


```
{
    "result": "success",
    "rule_safe": {
        "rule_id": "9115285645797883906",
        "safe_id": "9115285645797883906",
        "rule_name": "Rule_2",
        "safe_name": "RDP",
        "created_at": "2025-05-06 02:45:22.811459-07",
        "modified_at": "2025-05-06 02:45:22.811459-07"
    }
}
```


18.12.5 Create Rule-Safe Assignment

Request

Method	POST
Path	/api/v2/discovery/rule/safe
Headers	Content-Type: Application/json
Body	DiscoveryRuleSafeModel

Example Request

POST /api/v2/discovery/rule/safe`

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/discovery/rule/safe' \
  -d'{"rule_id":"9115285645797883906","safe_id":"9115285645797883906"}'
```

Response

```
{
    "result": "success"
}
```

18.12.6 Deleting Rule-Safe Assignment

Request

Method	DELETE
Path	/api/v2/discovery/rule/<rule_id>/safe/<safe_id>

Example Request

DELETE /api/v2/discovery/rule/<id>/safe/<id>`

```
curl -s -k -X DELETE \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/discovery/rule/9115285645797883906/safe/
↪9115285645797883906'
```

Response

```
{
    "result": "success"
}
```

18.13 Managing Discovery State

The *Discovery* feature enables to search for servers and accounts on domain controllers and local accounts on Windows servers.

18.13.1 Data Structures

Table 7: `DiscoveryModel`

Attribute	Type	Required	Description
`account_id`	string		Unique and read-only ID of the account to onboard/quarantine. Requires `modify` right on the `account` object for PATCH operations.
`server_id`	string		Unique and read-only ID of the server to onboard/quarantine. Requires `modify` right on the `server` object for PATCH operations.
`rule_id`	string		Read-only, protected ID of the rule used to onboard/quarantine.
`handled_by`	string		Read-only, protected object identifier.
`state`	string {onboarded, quarantined}	yes	Desired discovery state to be set.
`reason`	string, may be empty	if `type` == `quarantin`	Quarantine reason description.

18.13.2 Retrieve Available Attributes of the *DiscoveryModel*

Request

Method	`GET`
Path	`/api/v2/objspec/discovery`

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

18.13.3 Changing Server's Discovery State

Request

Method	`PATCH`
Path	`/api/v2/server/<server_id>/discovery`

Example Request

PATCH /api/v2/server/<id>/discovery`

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/server/1234567890123456798/discovery' \
  -d'{"state": "onboarded"}'
```

Response

```
{
    "result": "success"
}
```

Example Request

PATCH /api/v2/server/<id>/discovery`

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/server/1234567890123456789/discovery' \
  -d'{"state":"quarantined","reason": "Example text"}'
```

Response

```
{
    "result": "success"
}
```

Batch Request Example

```
{
    "requests": {
        "onboard_o": {
            "method": "PATCH",
            "endpoint": "/server/1234567890123456789/discovery",
            "data": {
                "state": "onboarded"
            }
        },
        "onboard_q": {
            "method": "PATCH",
            "endpoint": "/server/1234567890123456790/discovery",
            "data": {
                "state": "quarantined",
                "reason": "A quarantine reason"
            }
        }
    }
}
```

18.13.4 Changing Multiple Server's Discovery State NEW

Request

Method	`POST`
Path	`/api/v2/discovery/server/manage`

Example Request

POST /api/v2/discovery/server/manage`

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/discovery/server/manage' \
  -d'{"servers":["9115285645797883913","1234567890123456790"],"state":"onboard",
↪"pools":["9115285645797883908"]}'
```

Response

```
{
    "result": "success"
}
```

Example Request

POST /api/v2/discovery/server/manage`

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/discovery/server/manage' \
  -d'{"servers":["1234567890123456789","1234567890123456790"],"state":
↪"quarantine","reason":"Example text"}'
```

Response

```
{
    "result": "success"
}
```

18.13.5 Changing Account's Discovery State

Request

Method	PATCH
Path	/api/v2/account/<account_id>/discovery

Example Request

PATCH /api/v2/account/<id>/discovery`

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/account/1234567890123456789/discovery' \
  -d'{"state":"onboarded"}'
```

Response

```
{
    "result": "success"
}
```

Example Request

PATCH /api/v2/account/<id>/discovery`

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/account/1234567890123456789/discovery' \
  -d'{"state":"quarantined","reason":"Example text"}'
```

Response

```
{
    "result": "success"
}
```

18.13.6 Changing Multiple Account's Discovery State NEW

Request

Method	POST
Path	/api/v2/discovery/account/manage

Example Request

POST /api/v2/discovery/account/manage`

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/discovery/account/manage' \
  -d'{"accounts":["9115285645797883912","91152856457978839 21"],"state":"onboard
↪","safes":["9115285645797883906","9115285645797883907"],"listeners":[
↪"9115285645797883906","9115285645797883905"]}'
```

Response

```
{
    "result": "success"
}
```

Example Request

POST /api/v2/discovery/account/manage`

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/discovery/account/manage' \
  -d'{"accounts":["9115285645797883922","91152856457978839 23"],"state":
↪"quarantine","reason":"Example text"}'
```

Response

```
{
    "result": "success"
}
```

CHAPTER

NINETEEN

API V2: PASSWORD CHANGER POLICY

Password changer policy defines specifics of how frequently the password should be changed and password complexity requirements.

19.1 Data Structures

Table 1: `PasswordPolicyModel`

Attribute	Type	Required	Description
`id`	string		Read-only. Unique. Password change policy identifier.
`name`	string	yes	Unique, case-insensitive, password change policy name.
`change_frequency`	number {0 - 2147483647}	with `complexity_length`	Time in minutes after which password should be changed.
`verification_frequer`	number {0 - 2147483647}		Time in minutes after which password should be verified.
`complexity_length`	number {0 - 2147483647}		Total password length.
`password_changer_enabled`	boolean		Read-only. Expensive to use. Is password changer enabled for this policy?
`password_verifier_enabled`	boolean		Read-only. Expensive to use. Is password verifier enabled for this policy?
`complexity_lowercase`	number {0 - 2147483647}	with `complexity_length`	Number of lower case characters in password.
`complexity_uppercase`	number {0 - 2147483647}	with `complexity_length`	Number of upper case characters in password.
`complexity_numeric`	number {0 - 2147483647}	with `complexity_length`	Number of numeric characters in password.
`complexity_nonalnum`	number {0 - 2147483647}	with `complexity_length`	Number of special characters in password.
`created_at`	datetime		Read-only. Timestamp of creation.
`modified_at`	datetime		Read-only. Timestamp of modification.
`removed`	boolean		Read-only.

19.2 Retrieve Available Attributes of the *PasswordPolicyModel*

Request

Method	`GET`
Path	`/api/v2/objspec/password_change_policy`

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

19.3 Get Password Changer Policies List

Request

Method	`GET`
Path	`/api/v2/password_change_policy`

Example Request

GET /api/v2/password_change_policy`

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/password_change_policy'
```

Response

```
{
    "result": "success",
    "password_change_policy": [
        {
            "id": "1",
            "name": "Static, without restrictions",
            "password_changer_enabled": false,
            "password_verifier_enabled": false,
            "created_at": "2024-06-10 05:59:22.994431-07",
            "modified_at": "2024-06-10 05:59:22.994431-07",
            "builtin": true,
            "hidden": false
        },
        {
            "id": "9124292845052624897",
            "name": "Pass Changing Enabled",
            "change_frequency": 2,
            "complexity_length": 8,
            "password_changer_enabled": true,
            "password_verifier_enabled": false,
            "complexity_lowercase": 1,
            "created_at": "2024-06-11 23:29:24.511416-07",
```

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```
            "modified_at": "2024-06-12 02:16:38.410347-07",
            "builtin": false,
            "hidden": false
        }
    ]
}
```

19.4 Get Password Change Policy by ID

Request

Method	GET
Path	/api/v2/password_change_policy/<id>

Example Request

GET /api/v2/password_change_policy/<id>`

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/password_change_policy/9124292845052624897'
```

Response

```
{
    "result": "success",
    "password_change_policy": {
        "id": "9124292845052624897",
        "name": "Pass Changing Enabled",
        "change_frequency": 2,
        "complexity_length": 8,
        "password_changer_enabled": true,
        "password_verifier_enabled": false,
        "complexity_lowercase": 1,
        "created_at": "2024-06-11 23:29:24.511416-07",
        "modified_at": "2024-06-12 02:16:38.410347-07",
        "builtin": false,
        "hidden": false
    }
}
```

19.5 Defining Password Change Policy

Request

Method	POST
Path	/api/v2/password_change_policy
Headers	Content-Type: Application/json
Body	PasswordPolicyModel

Example Request

POST /api/v2/password_change_policy`

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/password_change_policy' \
  -d'{"name":"Password_Verif_1","change_frequency":2,"complexity_length":8,
↪"complexity_lowercase":2}'
```

Response

```
{
    "result": "success",
    "password_change_policy": {
        "id": "9124292845052624898"
    }
}
```

19.6 Modify Password Change Policy

Request

Method	PATCH
Path	/api/v2/password_change_policy/<id>
Headers	Content-Type: Application/json
Body	PasswordPolicyModel

Example Request

PATCH /api/v2/password_change_policy/<id>`

```
curl -s -k -X PATCH \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/password_change_policy/9124292845052624897' \
  -d'{"change_frequency":4,"complexity_lowercase":2}'
```

Response

```
{
    "result": "success"
}
```

19.7 Deleting Password Change Policy

Request

Method	DELETE
Path	/api/v2/password_change_policy/<id>

Example Request

DELETE /api/v2/password_change_policy/<id>`

```
curl -s -k -X DELETE \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/password_change_policy/9124292845052624897'
```

Response

```
{
    "result": "success"
}
```

CHAPTER

TWENTY

API V2: PASSWORD CHANGERS

Password changers manage credentials for privileged accounts on monitored servers. They operate on various transport layers: SSH, LDAP, Telnet, or WinRM. You can use built-in options or create custom scripts.

20.1 Data Structures

Table 1: `PasswordChangerModel`

Attribute	Type	Required	Description
`id`	string		Read-only, unique password change identifier.
`type`	string {change, verify}	yes	Password changer type.
`name`	string	yes	Unique, case-insensitive password changer name.
`transport`	string {LDAP, SSH, Telnet, WinRM}	If `type` == `change` || `verify`	Transport layer for password changer.
`timeout`	number {0 - 2147483647}	If `type` == `change` || `verify`	Script's execution time limit expressed in seconds. Value-range: 0 to 2147483647.
`builtin`	boolean		Read-only; expensive to use; if `true`, the object is not editable.
`hidden`	boolean		Read-only; expensive to use; if `true`, the object is hidden in UI.
`created_at`	datetime		Read-only. Timestamp of creation.
`modified_at`	datetime		Read-only. Timestamp of modification.
`removed`	boolean		Read-only.

20.2 Retrieve Available Attributes of the *PasswordChangerModel*

Request

Method	`GET`
Path	`/api/v2/objspec/password_changer`

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

20.3 Get Password Changers List

Request

Method	`GET`
Path	`/api/v2/password_changer`

Example Request

GET /api/v2/password_changer`

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/password_changer'
```

Response

```
{
    "result": "success",
    "password_changer": [
        {
            "id": "1",
            "type": "change",
            "name": "Unix\/SSH changer",
            "transport": "SSH",
            "timeout": 300,
            "builtin": true,
            "hidden": false,
            "created_at": "2024-06-10 05:59:22.99706-07",
            "modified_at": "2024-06-10 05:59:22.99706-07"
        },
        {
            "id": "2",
            "type": "verify",
            "name": "Unix\/SSH verifier",
            "transport": "SSH",
            "timeout": 300,
            "builtin": true,
            "hidden": false,
```

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```
            "created_at": "2024-06-10 05:59:22.997876-07",
            "modified_at": "2024-06-10 05:59:22.997876-07"
        }
    ]
}
```

20.4 Get Password Changer by ID

Request

Method	GET
Path	/api/v2/password_changer/<id>

Example Request

GET /api/v2/password_changer/<id>`

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/password_changer/1'
```

Response

```
{
    "password_changer": {
        "id": "1",
        "name": "Unix\/SSH changer",
        "type": "change",
        "transport": "SSH",
        "timeout": 300,
        "variables": [
            {
                "name": "transport_bind_ip",
                "description": "An IP on Fudo interface that will be used as␣
↪source address.",
                "object_type": "server",
                "object_property": "bind_ip",
                "encrypted": false,
                "optional": true,
                "transport": true,
                "value": {
                    "value_type": "self"
                }
            },
            {
                "name": "transport_host",
                "description": "An address to which password changer\/verifier␣
↪connects.",
```

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```
                "object_type": "server",
                "object_property": "address",
                "encrypted": false,
                "optional": false,
                "transport": true,
                "value": {
                    "value_type": "self"
                }
            }
        ],
        "commands": [
            {
                "type": "expected",
                "value": "Last login:",
                "description": null
            },
            {
                "type": "input",
                "value": "passwd %%account_login%%",
                "description": null
            }
        ],
        "builtin": true,
        "hidden": false,
        "created_at": "2024-06-10 05:59:22.99706-07",
        "modified_at": "2024-06-10 05:59:22.99706-07"
    },
    "result": "success"
}
```


20.5 Defining Password Changer

Request

Method	`POST`
Path	`/api/v2/password_changer`
Headers	`Content-Type: Application/json`
Body	`PasswordChangerModel`

Example Request

POST /api/v2/password_changer`

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/password_changer' \
  -d'{"name":"Password_Changer_WinRM","type":"change","transport":"WinRM",
```

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```
↪"timeout":1000,"commands":[{"type":"input","value":"net user \"%%account_login
↪%%\" \"%%account_new_secret%%\"","description":"Description text."}]}'
```

Response

```
{
    "password_changer": {
        "id": "9124292845052624933"
    },
    "result": "success"
}
```

20.6 Modify Password Changer

Request

Method	`PATCH`
Path	`/api/v2/password_changer/<id>`
Headers	`Content-Type: Application/json`
Body	`PasswordChangerModel`

Example Request: Change Basic Properties

PATCH /api/v2/password_changer/<id>`

```
curl -s -k -X PATCH \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/password_changer/9124292845052624927' \
  -d'{"type":"verify","transport":"SSH","timeout":1000}'
```

Example Request: Modifying Commands

PATCH /api/v2/password_changer/<id>`

```
curl -s -k -X PATCH \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/password_changer/9124292845052624933' \
  -d'{"commands":[{"type":"input","value":"net user \"%%account_login%%\" \"%
↪%account_new_secret%%\"","description":"Description."}]}'
```

Example Request: Adding Variable

PATCH /api/v2/password_changer/<id>`

```
curl -s -k -X PATCH \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/password_changer/9124292845052624933' \
```

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```
  -d'{"variables":[{"name":"transport_bind_ip","object_type":"server","object_
↪property":"name","value":{"value_type":"self"}}]}'
```

Response

```
{
    "result": "success"
}
```

20.7 Triggering Password Change for the Account

Request

Method	POST
Path	/api/v2/account/<id>/trigger_password_changer

Example Request

POST /api/v2/account/<id>/trigger_password_changer`

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/account/9124292845052624908/trigger_password_
↪changer'
```

Response

```
{
    "result": "success"
}
```

20.8 Deleting Password Changer

Request

Method	DELETE
Path	/api/v2/password_changer/<id>

Example Request

DELETE /api/v2/password_changer/<id>`

```
curl -s -k -X DELETE \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/password_changer/9124292845052624927'
```

Response

```
{
    "result": "success"
}
```

CHAPTER

TWENTYONE

API V2: POLICIES AND REGULAR EXPRESSIONS

Policies are patterns definitions facilitating proactive session monitoring. In case a defined pattern is detected, Fudo Enterprise can automatically take respective actions and notify the administrator about the current situation.

21.1 Regular Expressions

21.1.1 Data Structures

Table 1: `RegExpModel`

Attribute	Type	Required	Description
`id`	string		Read-only, unique regular expression identifier.
`name`	string	yes	Unique, case-insensitive regular expression name.
`type`	string {ml, regexp}	yes	Immutable. Policy type.
`regexp`	string	yes	Regular expression content.
`created_at`	datetime		Read-only. Timestamp of creation.
`modified_at`	datetime		Read-only. Timestamp of modification.
`removed`	boolean		Read-only.

21.1.2 Retrieve Available Attributes of the *RegExpModel*

Request

Method	`GET`
Path	`/api/v2/objspec/regexp`

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

21.1.3 Get Regular Expressions List

Request

Method	`GET`
Path	`/api/v2/regexp`

Example Request

GET /api/v2/regexp`

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/regexp'
```

Response

```
{
    "result": "success",
    "regexp": [
        {
            "id": "9124292845052624897",
            "name": "Reg_ex_1",
            "regexp": "(^|[^a-zA-Z])rm[[:space:]]",
            "created_at": "2024-06-14 05:46:25.34634-07",
            "modified_at": "2024-06-14 05:46:25.34634-07"
        }
    ]
}
```

21.1.4 Get Regular Expression by ID

Request

Method	GET
Path	/api/v2/regexp/<id>

Example Request

GET /api/v2/regexp/<id>`

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/regexp/9124292845052624897'
```

Response

```
{
    "result": "success",
    "regexp": {
        "id": "9124292845052624897",
        "name": "Reg_ex_1",
        "regexp": "(^|[^a-zA-Z])rm[[:space:]]",
        "created_at": "2024-06-14 05:46:25.34634-07",
        "modified_at": "2024-06-14 05:46:25.34634-07"
    }
}
```

21.1.5 Defining Regular Expression

Request

Method	`POST`
Path	`/api/v2/regexp`
Headers	`Content-Type: Application/json`
Body	`RegExpModel`

Example Request

POST /api/v2/regexp`

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/regexp' \
  -d'{"name":"Reg_ex_2","regexp":"(^|[^a-zA-Z])rm[[:space:]]"}'
```

Response

```
{
    "result": "success",
    "regexp": {
        "id": "9124292845052624900"
    }
}
```

21.1.6 Modify Regular Expression

Request

Method	`PATCH`
Path	`/api/v2/regexp/<id>`
Headers	`Content-Type: Application/json`
Body	`RegExpModel`

Example Request

PATCH /api/v2/regexp/<id>`

```
curl -s -k -X PATCH \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/regexp/9124292845052624897' \
  -d'{"regexp":"(^|[^a-zA-Z])rm[[:space:]]"}''
```

Response

```
{
    "result": "success"
}
```

21.1.7 Deleting Regular Expression

Request

Method	DELETE
Path	/api/v2/regexp/<id>

Example Request

DELETE /api/v2/regexp/<id>`

```
curl -s -k -X DELETE \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/regexp/9124292845052624897'
```

Response

```
{
    "result": "success"
}
```

21.2 Policies

21.2.1 Data Structures

Table 2: *PolicyModel*

Attribute	Type	Required	Description
`id`	string		Read-only, unique policy identifier.
`name`	string	yes	Unique, case-insensitive policy name.
`type`	string {ml, regexp}	yes	Immutable. Policy type.
`priority`	string {critical, high, medium, low}	yes	Expensive to use.
`email_send`	boolean; default value `false`	yes	
`input_match`	boolean; default value `false`	yes	
`snmp_trap`	boolean; default value `false`	yes	
`session_pause`	boolean; default value `false`	yes	
`session_terminate`	boolean; default value `false`	yes	
`user_block`	boolean; default value `false`	yes	
`ml_threat_probabilit`	string {avg, max, min}	If `type` == `ml`	
`ml_threat_threshold`	number	If `type` == `ml`	
`created_at`	datetime		Read-only. Timestamp of creation.
`modified_at`	datetime		Read-only. Timestamp of modification.
`removed`	boolean		Read-only.

Request for Retrieving Available Attributes

Request

Method	`GET`
Path	`/api/v2/objspec/policy`

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

21.2.2 Get Policies List

Request

Method	GET
Path	/api/v2/policy

Example Request

GET /api/v2/policy

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w61877n1g06sk' \
  'https://10.0.214.98/api/v2/policy'
```

Response


```
{
    "result": "success",
    "policy": [
        {
            "id": "9124292845052624897",
            "name": "PCP",
            "type": "regexp",
            "priority": "medium",
            "email_send": true,
            "input_match": false,
            "snmp_trap": false,
            "session_pause": false,
            "session_terminate": false,
            "user_block": false,
            "created_at": "2024-06-11 22:52:18.44898-07",
            "modified_at": "2024-06-11 22:52:18.44898-07"
        },
        {
            "id": "9124292845052624898",
            "name": "AI_Policy_1",
            "type": "regexp",
            "priority": "low",
            "email_send": false,
            "input_match": false,
            "snmp_trap": false,
            "session_pause": false,
            "session_terminate": false,
            "user_block": false,
            "created_at": "2024-06-14 15:15:58.534771-07",
            "modified_at": "2024-06-14 15:15:58.534771-07"
        }
    ]
}
```

21.2.3 Get Policy by ID

Request

Method	`GET`
Path	`/api/v2/policy/<id>`

Example Request

GET /api/v2/policy/<id>

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w61877n1g06sk' \
  'https://10.0.214.98/api/v2/policy/9124292845052624897'
```

Response

```
{
    "result": "success",
    "policy": {
        "id": "9124292845052624897",
        "name": "PCP",
        "type": "regexp",
        "priority": "medium",
        "email_send": true,
        "input_match": false,
        "snmp_trap": false,
        "session_pause": false,
        "session_terminate": false,
        "user_block": false,
        "created_at": "2024-06-11 22:52:18.44898-07",
        "modified_at": "2024-06-11 22:52:18.44898-07"
    }
}
```

21.2.4 Create Policy

Request

Method	`POST`
Path	`/api/v2/policy`
Headers	`Content-Type: Application/json`
Body	`PolicyModel`

Example Request

POST /api/v2/policy

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
```

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```
  'https://10.0.214.98/api/v2/policy' \
  -d'{"name":"Policy_1","type":"regexp","priority":"medium","email_send":true,
↪"session_pause":true}'
```

Response

```
{
    "result": "success",
    "policy": {
        "id": "9124292845052624899"
    }
}
```

21.2.5 Modify Policy

Request

Method	PATCH
Path	/api/v2/policy/<id>
Headers	Content-Type: Application/json
Body	PolicyModel

Example Request

PATCH /api/v2/policy/<id>

```
curl -s -k -X PATCH \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/policy/9124292845052624927' \
  -d'{"priority":"low","email_send":false,"user_block":true}'
```

Response

```
{
    "result": "success"
}
```

21.2.6 Deleting Policy

Request

Method	DELETE
Path	/api/v2/policy/<id>

Example Request

DELETE /api/v2/policy/<id>

```
curl -s -k -X DELETE -H 'Authorization: sgfeea6jsaz4mum9su8w61877n1g06sk'␣
↪https://10.0.214.98/api/v2/policy/9124292845052624899
```

Response

```
{
    "result": "success"
}
```

21.3 Managing Regular Expressions Assignment

21.3.1 Data Structures

Table 3: `RegExpPolicyModel`

Attribute	Type	Required	Description
`id`	string		Read-only, unique regular expression policy identifier.
`policy_id`	string	yes	Immutable policy identifier.
`regexp_id`	string	yes	Immutable regular expression identifier.
`policy_name`	string		Read-only, expensive to use.
`regexp_name`	string		Read-only, expensive to use.
`created_at`	datetime		Read-only. Timestamp of creation.
`modified_at`	datetime		Read-only. Timestamp of modification.
`removed`	boolean		Read-only.

21.3.2 Retrieve Available Attributes of the *RegExpPolicyModel*

Request

Method	`GET`
Path	`/api/v2/objspec/regexp_policy`

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

21.3.3 Get the List of Regular Expression Assignments for Policies

Request

Method	`GET`
Path	`/api/v2/policy/regexp`

Example Request

GET /api/v2/policy/regexp`

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/policy/regexp'
```

Response


```
{
    "result": "success",
    "regexp_policy": [
        {
            "policy_id": "9124292845052624899",
            "regexp_id": "9124292845052624897",
            "policy_name": "Policy_1",
            "regexp_name": "Reg_ex_1",
            "created_at": "2024-06-20 03:34:38.425893-07",
            "modified_at": "2024-06-20 03:34:38.425893-07"
        },
        {
            "policy_id": "9124292845052624897",
            "regexp_id": "9124292845052624900",
            "policy_name": "Policy_2",
            "regexp_name": "Reg_ex_2",
            "created_at": "2024-06-20 06:56:17.452651-07",
            "modified_at": "2024-06-20 06:56:17.452651-07"
        },
        {
            "policy_id": "9124292845052624897",
            "regexp_id": "9124292845052624897",
            "policy_name": "Policy_2",
            "regexp_name": "Reg_ex_1",
            "created_at": "2024-06-20 06:56:17.452652-07",
            "modified_at": "2024-06-20 06:56:17.452652-07"
        },
        {
            "policy_id": "9124292845052624900",
            "regexp_id": "9124292845052624900",
            "policy_name": "Policy_3",
            "regexp_name": "Reg_ex_2",
            "created_at": "2024-06-20 06:56:35.335851-07",
            "modified_at": "2024-06-20 06:56:35.335851-07"
        }
    ]
}
```

21.3.4 Assigning Regular Expression to a Policy

Request

Method	`POST`
Path	`/api/v2/policy/regexp`
Headers	`Content-Type: Application/json`
Body	`RegExpPolicyModel`

Example Request

POST /api/v2/policy/regexp`

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/policy/regexp' \
  -d'{"policy_id":"9124292845052624899","regexp_id":"9124292845052624900"}'
```

Response

```
{
    "result": "success"
}
```

21.3.5 Checking Regular Expression Assignment With a Policy

Request

Method	`GET`
Path	`/api/v2/policy/<policy_id>/regexp/<regexp_id>`
Headers	`Content-Type: Application/json`
Body	`PolicyModel`

Example Request

GET /api/v2/policy/<id>/regexp/<id>`

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/policy/9124292845052624899/regexp/
↪9124292845052624897'
```

Response

```
{
    "result": "success",
    "regexp_policy": {
        "policy_id": "9124292845052624899",
        "regexp_id": "9124292845052624897",
        "policy_name": "Policy_1",
```

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```
        "regexp_name": "Reg_ex_1",
        "created_at": "2024-06-20 03:16:15.126665-07",
        "modified_at": "2024-06-20 03:16:15.126665-07"
    }
}
```

21.3.6 Deleting Regular Expression Assignment to a Policy

Request

Method	DELETE
Path	/api/v2/policy/<policy_id>/regexp/<regexp_id>

Example Request

DELETE /api/v2/policy/<id>/regexp/<id>`

```
curl -s -k -X DELETE \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/policy/9124292845052624899/regexp/
↪9124292845052624897'
```

Response

```
{
    "result": "success"
}
```

CHAPTER

TWENTYTWO

API V2: DOWNLOADS

The Fudo Enterprise allows for tracking the conversion progress of session recordings and files transferred during SFTP sessions, previously selected for download.

Note

The Files section is designated for managing the downloads of large files that originate from recorded sessions via the SFTP protocol. If the selected file exceeds the 50 MB threshold, it undergoes an encoding process and subsequently appears in the Files tab, ready for download. Files smaller than 50 MB are directly downloaded through the browser without encoding.

22.1 Data Structures

Table 1: `SessionFileModel`

Attribute	Type	Required	Description
`id`	string		Unique and read-only object Identifier
`session_id`	string		Read-only. ID of the session to download.
`encode_on`	string		Read-only. Node on which file was encoded.
`handle`	number		Read-only.
`delta`	number		Read-only.
`from_server`	boolean		Read-only.
`error`	string		Read-only. Error when file is not ready for download.
`size`	number		Read-only. Size of downloaded session file in bytes.
`session_user`	string		Read-only. Expensive. Session user name.
`session_user_id`	string		Read-only. Expensive. Session user id.
`session_server`	string		Read-only. Expensive. Session server name.
`session_server_id`	string		Read-only. Expensive. Session server id.
`session_started`	string		Read-only. Expensive. Timestamp. Time when session started.
`is_converted`	boolean		Read-only. Expensive. Encoding is complete and file is ready to download.
`progress`	number		Read-only. Expensive. Progress of session conversion in percentage.

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Table 1 – continued from previous page

Attribute	Type	Required	Description
encode_on_name	string		Read-only. Expensive. Node name on which session was encoded.

22.2 Retrieve available attributes of the *SessionFileModel*

Request

Method	GET
Path	/api/v2/objspec/session_file

Table 2: SessionMovieModel

Attribute	Type	Required	Description
id	string		Unique and read-only object Identifier
session_id	string		Read-only. ID of the session to download.
encode_on	string		Read-only. Node on which session was encoded.
video_resolution	string {auto, hd480, hd720, hd1080}		Read-only.
video_format	string {divx5, fbsdir, flv, mjpeg, mpeg2, pcap, text, webm, xvid}		Read-only.
size	number		Read-only. Size of downloaded session file in bytes.
session_user	string		Read-only. Expensive. Session user name.
session_user_id	string		Read-only. Expensive. Session user id.
session_server	string		Read-only. Expensive. Session server name.
session_server_id	string		Read-only. Expensive. Session server id.
session_started	string		Read-only. Expensive. Timestamp. Time when session started.
is_converted	boolean		Read-only. Expensive. Encoding is complete and file is ready to download.
progress	number		Read-only. Expensive. Progress of session conversion in percentage.

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Table 2 – continued from previous page

Attribute	Type	Required	Description
encode_on_name	string		Read-only. Expensive. Node name on which session was encoded.
created_at	datetime		Read-only. Timestamp of creation.
modified_at	datetime		Read-only. Timestamp of modification.
removed	boolean		Read-only.

22.3 Retrieve Available Attributes of the *SessionMovieModel*

Request

Method	GET
Path	/api/v2/objspec/session_movie

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

22.4 Get Session Files List

Request

Method	GET
Path	/api/v2/session_file

Example Request

GET /api/v2/session_file`

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/session_file'
```

Response

```
{
    "result": "success",
    "session_file": [
        {
            "id": "1",
            "session_id": "5620492334958379016",
            "encode_on": "82984746",
            "handle": 1,
            "from_server": true,
            "size": 56622199,
```

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```
            "session_user": "User_1",
            "session_user_id": "5620492334958379010",
            "session_server": "SSH_FTP",
            "session_server_id": "5620492334958379018",
            "session_started": "2024-06-25 02:43:38.152033-07",
            "is_converted": true,
            "progress": 100
        }
    ]
}
```


22.5 Get Session Recordings List

Request

Method	`GET`
Path	`/api/v2/session_movie`

Example Request

GET /api/v2/session_movie`

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/session_movie'
```

Response


```
{
    "result": "success",
    "session_movie": [
        {
            "id": "5620492334958379009",
            "session_id": "5620492334958379015",
            "encode_on": "82984746",
            "video_resolution": "auto",
            "video_format": "fbsdir",
            "size": 2399446,
            "session_user": "User_1",
            "session_user_id": "5620492334958379010",
            "session_server": "SSH_FTP",
            "session_server_id": "5620492334958379018",
            "session_started": "2024-06-25 02:25:26.670768-07",
            "is_converted": true,
            "progress": 100,
            "created_at": "2024-06-25 02:41:07.835711-07",
            "modified_at": "2024-06-25 02:41:08.047049-07"
        },
```


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```
        {
            "id": "5620492334958379010",
            "session_id": "5620492334958379017",
            "encode_on": "82984746",
            "video_resolution": "auto",
            "video_format": "divx5",
            "size": 3108346,
            "session_user": "User_1",
            "session_user_id": "5620492334958379010",
            "session_server": "RDP_SERVER",
            "session_server_id": "5620492334958379011",
            "session_started": "2024-06-25 03:03:46.780874-07",
            "is_converted": true,
            "progress": 100,
            "created_at": "2024-06-25 03:04:10.370597-07",
            "modified_at": "2024-06-25 03:04:17.472475-07"
        }
    ]
}
```


22.6 Downloading Session Files

Request

Method	GET
Path	/api/v2/download/session_file/<id>

Example Request

GET /api/v2/download/session_file/<id>`

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/download/session_file/1'
```

Response

File download is starting.

22.7 Downloading Session Recordings

Request

Method	GET
Path	/api/v2/download/session_movie/<id>

Example Request

GET /api/v2/download/session_movie/<id>`

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/download/session_movie/1'
```

Response

Session recording download is starting.

22.8 Deleting Session File

Request

Method	DELETE
Path	/api/v2/session_file/<id>

Example Request

DELETE /api/v2/session_file/<id>`

```
curl -s -k -X DELETE \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/session_file/1'
```

Response

```
{
    "result": "success"
}
```

22.9 Deleting Session Recording

Request

Method	DELETE
Path	/api/v2/session_movie/<id>

Example Request

DELETE /api/v2/session_movie/<id>`

```
curl -s -k -X DELETE \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/session_movie/1'
```

Response

```
{
    "result": "success"
}
```

CHAPTER

TWENTYTHREE

API V2: REMOTE APPLICATIONS

Fudo Enterprise enables direct connection over the RDP protocol to a remote application using Remote Applications feature.

23.1 Data Structures

Table 1: `RemoteApplicationsModel`

Attribute	Type	Required	Description
`id`	string		Read-only unique object Identifier
`name`	string	yes	Unique, case insensitive application name
`password_changer_id`	string	yes	Password changer unique identifier assigned to remote app
`path`	string	yes	Path to application executable file
`arguments`	string		Definitions of which object and what property of object to use
`variables`	object-array		
`created_at`	datetime		Read-only
`modified_at`	datetime		Read-only
`removed`	boolean		Read-only

23.2 Retrieve Available Attributes of the *RemoteApplicationsModel*

Request

Method	`GET`
Path	`/api/v2/objspec/remote_app`

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

23.3 Get Remote Applications Definitions List

Request

Method	GET
Path	/api/v2/remote_app

Example Request

GET /api/v2/remote_app`

```
"result": "success",
"remote_app": [
    {
        "id": "1936547839769313283",
        "name": "RemoteApp1",
        "path": "/foldername/application1_executable_file",
        "created_at": "2022-12-13 02:53:32.427697-08",
        "modified_at": "2022-12-13 02:53:32.427697-08"
    },
    {
        "id": "1936547839769313284",
        "name": "RemoteApp2",
        "path": "/foldername/application2_executable_file",
        "created_at": "2022-12-13 02:53:44.722701-08",
        "modified_at": "2022-12-13 02:53:44.722701-08" }]
```

23.4 Get Remote Applications Definitions List by ID

Request

Method	GET
Path	/api/v2/remote_app/<id>

Example Request

GET /api/v2/remote_app/<id>`

```
{
    "remote_app": {
        "id": "1936547839769313283",
        "name": "RemoteApp1",
        "path": "/foldername/application1_executable_file",
        "created_at": "2022-12-13 02:53:32.427697-08",
        "modified_at": "2022-12-13 02:53:32.427697-08"
    },
    "result": "success"
}
```

23.5 Defining Remote Applications Definition

Request

Method	POST
Path	/api/v2/remote_app
Headers	Content-Type: Application/json
Body	RemoteApplicationsModel

Example Request

POST /api/v2/remote_app`

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/remote_app' \
  -d'{"name":"Putty","password_changer_id":"9115285645797883914","path":"C:\\
↪Windows\\System32\\putty.exe"}'
```

Response

```
{
    "remote_app": {
        "id": "9115285645797883916",
        "name": "Putty",
        "path": "C:\\Windows\\System32\\putty.exe",
        "arguments": null,
        "variables": null,
        "password_changer_id": "9115285645797883916"
    },
    "result": "success"
}
```

23.6 Modify Remote Applications Definition

Request

Method	PATCH
Path	/api/v2/remote_app/<id>
Headers	Content-Type: Application/json
Body	RemoteApplicationsModel

Example Request

PATCH /api/v2/remote_app/<id>`

```
curl -s -k -X PATCH -H 'Authorization:sgfeea6jsaz4mum9su8w61877n1g06sk' https://
↪10.31.87.227/api/v2/remote_app/9115285645797883916 -H 'Content-Type:␣
```

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```
↪application/json' -d'{"name":"Putty","path":"C:\\Windows\\System32\\putty_ext.
↪exe"}'
```

Response

```
{
    "remote_app": {
        "id": null,
        "name": "Putty",
        "path": "C:\\Windows\\System32\\putty_ext.exe",
        "arguments": null,
        "variables": null,
        "password_changer_id": null
    },
    "result": "success"
}
```

23.7 Deleting a Remote Application Definition

Request

Method	DELETE
Path	/api/v2/remote_app/<id>

CHAPTER

TWENTYFOUR

API V2: SESSIONS NEW

Fudo Enterprise stores all recorded servers access sessions, allowing to playback, review, delete and export to the supported video formats.

Sessions management allows filtering stored user sessions, accessing current users connections and downloading stored sessions. It also provides status information on each session and enables access to session sharing options.

24.1 API v2: Sessions Management

24.1.1 Data Structures

Note

The following data structure contains `read-only` fields for retrieving session data.

Table 1: `SessionsModel`

Attribute	Type	Description
`id`	string	Object Identifier
`leader_session_id`	string	Object Identifier
`account_id`	string	Account's Identifier, which was used for connection. Requires `read` right on object type `account` for all methods: `GET`, `PATCH`, and `DELETE`.
`listener_id`	string	Listener's Identifier, which was used for connection
`safe_id`	string	Safe's Identifier, which was used for connection. Requires `read` right on object type `safe` for all methods: `GET`, `PATCH`, and `DELETE`.
`server_id`	string	Server's Identifier, which was used for connection. Requires `read` right on object type `server` for all methods: `GET`, `PATCH`, and `DELETE`.

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Table 1 – continued from previous page

Attribute	Type	Description
`user_id`	string	User's Identifier, which was used for connection. Requires `read` right on object type `user` for all methods: `GET`, `PATCH`, and `DELETE`.
`started_at`	string	Datetime of the session's start
`finished_at`	string	Datetime of the session's end
`handled_by`	string	Object Identifier
`marked_safe_by`	string	
`terminate_at`	string	Datetime of the session's termination
`dump_mode`	string {all, none, raw, noraw}	Session recording options
`protocol`	string {http, modbus, mysql, rdp, ssh, system, tcp, tds, telnet, tn3270, tn5250, vnc}	Read-only. Protocol used for connection.
`source_ip`	string	Source IP address
`source_port`	number	Port of the source IP address
`destination_ip`	string	Destination IP address
`destination_port`	number	Port of the destination IP address
`destination_address`	string	Expensive. Concatenated destination IP and port.
`paused`	boolean	
`retention_locked`	boolean	
`indexed`	number	Session indexing status. Values: 0 = Waiting, 1 = Error, 2 = Indexed. Session is indexed when value is 2.
`trusted_timestamp`	string	Hidden. Base64 encoded timestamping signature.
`size`	number	
`reason`	string	Reason of the session's termination or rejection
`status`	string {approved, disconnected, expired, rejected, terminated, waiting}	
`active_time`	number	
`ml` (Machine Learning)	See the `SessionsMLModel` table	
`pending_delete`	boolean	
`password_change`	boolean	
`checkout_forced`	boolean	
`created_at`	datetime	Datetime of the record creation
`modified_at`	datetime	Datetime of the record modification
`removed`	boolean	
`login_reason`	string	Reason for user's connection
`bits_per_pixel`	string	Resolution options
`height`	string	Resolution options
`width`	string	Resolution options
`type`	string	Session's type

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Table 1 – continued from previous page

Attribute	Type	Description
subsystem	string	Read-only. Expensive to use. For example, sftp.
user_name	string	Expensive. User name who created session.
user_removed	boolean	Expensive. User is removed.
user_organization	string	Expensive. User organization who created session.
account_name	string	Expensive. Account name.
account_removed	boolean	Expensive. Account is removed.
server_name	string	Expensive. Server name.
server_removed	boolean	Expensive. Server is removed.
safe_name	string	Expensive. Safe name.
safe_removed	boolean	Expensive. Safe is removed.
listener_name	string	Expensive. Listener name.
listener_removed	boolean	Expensive. Listener is removed.
secret_exposure_stat	string {user_blocked, user_removed, user_lost_access, seen}	Expensive. State of user who checked out the current account password. Value 'seen' means that user has seen password and have access to it.
ocr_enabled	boolean	Read-only. Expensive. Indicates whether OCR was enabled for the session.
ocrable	boolean	Read-only. Expensive. Indicates whether the session is eligible for OCR processing.
ocred	boolean	Expensive. Indicates whether OCR has been completed for the session.
ocr_progress	number	Read-only. Expensive. Current progress of OCR processing.
availability	string {archived, available, downloading, missing}	Expensive. Session availability.
created_on	string	Expensive. The serial number of the node where the session was created.
archived	boolean	Read-only. Expensive. Session is fully replicated on archive node.
duration	number	Expensive. Session duration in seconds.
activity	number	Expensive. Session active time in percents.
time_limit	number	Expensive. Time in seconds remaining until the session is terminated. Value is available only when terminate_at defined. Value 0 means session is finished or terminated.
unfinished_archive	boolean	Read-only. Expensive to use. Indicates whether the session is not fully replicated on the archive node.

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Table 1 – continued from previous page

Attribute	Type	Description
query_text	string	Read-only. Hidden. Used only for filters. Query text to search for.
query_input	boolean	Read-only. Hidden. Used only for filters. Indicates whether to search text in user input.
query_output	boolean	Read-only. Hidden. Used only for filters. Indicates whether to search text in output.
query_comments	boolean	Read-only. Hidden. Used only for filters. Indicates whether to search text in comments.
websocket_url	string	Read-only. Expensive to use. A part of the URL to the websocket that serves the data of this session.
timestamp_status	string {none, pending, completed}	Read-only. Expensive to use. Status of timestamping process.
subprotocol	string {checkout, http, http_rendered, modbus, mysql, rdp, scp, sftp, ssh, ssh_command, tcp, tds, telnet, tn3270, tn5250, vnc, x11}	Read-only. Expensive to use. Session subprotocol.
local	boolean	Read-only. Expensive to use. Indicates that the session is running or has a replica on the current cluster node.
replicated_on_nodes	string-array	Read-only. Expensive to use. List of nodes that the session was fully replicated on.
has_comments	boolean	Read-only. Expensive to use. Indicates whether any comments have been added to the session.

Table 2: SessionsMLModel

Attribute	Type	Description
ml_threat_level	number	Detected threat level
ml_threat_level_min	number	Min threat level value
ml_threat_level_max	number	Max threat level value
ml_converted_at	string	Datetime of the session's processing
ml_finished_at	string	End datetime of the session's processing

24.1.2 Retrieve Available Attributes of the *SessionsModel*

Request

Method	`GET`
Path	`/api/v2/objspec/session`

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

Refer to the *Batch operations* topic to create nested requests for operating on the Sessions objects.

24.1.3 Get Sessions List

Request

Method	`GET`
Path	`/api/v2/session`

Example Request

GET /api/v2/session


```
    {
"result": "success",
"session": {
    "id": "3927138875067084301",
    "leader_session_id": "3927138875067084301",
    "listener_id": "3927138875067073099",
    "user_id": "3927138875067072685",
    "safe_id": "3927138875067072584",
    "account_id": "3927138875067088645",
    "server_id": "3927138875067072586",
    "started_at": "2022-04-05 16:06:07.313862+02",
    "finished_at": "2022-04-05 16:07:58.65701+02",
    "dump_mode": "all",
    "protocol": "vnc",
    "source_ip": "10.2.0.0",
    "source_port": 65331,
    "destination_ip": "10.0.0.1",
    "destination_port": 5900,
    "paused": false,
    "retention_locked": false,
    "indexed": 2,
    "size": 371712,
    "status": "approved",
    "active_time": 60,
    "password_change": false,
    "checkout_forced": false,
    "created_at": "2022-04-05 16:06:07.316523+02",
```


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```
    "modified_at": "2022-04-08 08:16:02.009606+02",
    "height": "768",
    "width": "1024"
}}
```

24.1.4 Get a Session by ID

Request

Method	`GET`
Path	`/api/v2/session/<id>`

Example Request

GET /api/v2/session/<id>

```
    {
"result": "success",
"session": {
    "id": "3927138875067084301",
    "leader_session_id": "3927138875067084301",
    "listener_id": "3927138875067073099",
    "user_id": "3927138875067072685",
    "safe_id": "3927138875067072584",
    "account_id": "3927138875067088645",
    "server_id": "3927138875067072586",
    "started_at": "2022-04-05 16:06:07.313862+02",
    "finished_at": "2022-04-05 16:07:58.65701+02",
    "dump_mode": "all",
    "protocol": "vnc",
    "source_ip": "10.2.0.0",
    "source_port": 65331,
    "destination_ip": "10.0.0.1",
    "destination_port": 5900,
    "paused": false,
    "retention_locked": false,
    "indexed": 2,
    "size": 371712,
    "status": "approved",
    "active_time": 60,
    "password_change": false,
    "checkout_forced": false,
    "created_at": "2022-04-05 16:06:07.316523+02",
    "modified_at": "2022-04-08 08:16:02.009606+02",
    "height": "768",
    "width": "1024"
}}
```

24.1.5 Modify a Session

Request

Method	`PATCH`
Path	`/api/v2/session/<id>`

24.1.6 Delete Session

Request

Method	`DELETE`
Path	`/api/v2/session/<id>`

Example Request

DELETE /api/v2/session/<id>

```
curl -s -k -X DELETE \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/session/9124292845052624897'
```

Response

```
{
    "result": "success"
}
```

24.2 API v2: Sharing Sessions NEW

Fudo Enterprise enables sharing given session with another user.

24.2.1 Data Structures

Table 3: `SessionShareModel`

Attribute	Type	Required	Description
`id`	string		Unique, read only object identifier. Protected.
`session_id`	string	yes	ID of the session to share. Immutable.
`user_id`	string	yes	Read-only. Hidden. Expensive to use. Immutable. Requires `session-view` right on the `user` object for GET and POST requests.
`key`	string		Read-only.
`valid_since`	datetime	yes	**Immutable. Start date and time of the share validity period, in ISO 8601 format** `(YYYY-MM-DDTHH:MM:SS.sssZ).` Example: `2025-05-15T13:07:00.000Z`
`valid_to`	datetime	yes	Immutable. End date and time of the share validity period, in ISO 8601 format `(YYYY-MM-DDTHH:MM:SS.sssZ)`. Example: `2025-05-15T21:07:00.000Z`
`readonly`	boolean	yes	Immutable. Define whether the third party will be able to actively participate in session (applicable to live sessions).
`link`	string		Provide a session link that excludes the host prefix. Read-only. Expensive to use.
`created_at`	datetime		Read-only. Timestamp of creation.
`modified_at`	datetime		Read-only. Timestamp of modification.
`removed`	boolean		Read-only.

24.2.2 Retrieve Available Attributes of the *SessionShareModel*

Request

Method	`GET`
Path	`/api/v2/objspec/session_share`

GET /api/v2/objspec/session_share

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/objspec/session_share'
```

24.2.3 Get Session Sharing Information

Request

Method	`GET`
Path	`/api/v2/session/<session_id>/share`

GET /api/v2/session/<session_id>/share

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.31.92.108/api/v2/session/4782822804267466753/share'
{
```

Response

```
{
    "result": "success",
    "session_share": [
        {
            "session_id": "4665729213955833860",
            "key":
↪"yKaOzVjAoPZ6Hga6ECFEoVD2yKJXrrcPTDvhYFeUYNfxJaLs8D1piZdhFLIxivcT",
            "valid_since": "2025-05-14 05:11:00-07",
            "valid_to": "2025-05-14 13:11:00-07",
            "readonly": true,
            "link": "\/sessions\/4665729213955833860\/?
↪key=yKaOzVjAoPZ6Hga6ECFEoVD2yKJXrrcPTDvhYFeUYNfxJaLs8D1piZdhFLIxivcT",
            "created_at": "2025-05-14 05:11:20.443267-07",
            "modified_at": "2025-05-14 05:11:20.443267-07"
        },
        {
            "session_id": "4665729213955833860",
            "key":
↪"fEGWO92C3IDki0EaMgpbpOffRFYSNhg6gYa6jYMp2zyfcMtFpIKdMr20S1jGKD3t",
            "valid_since": "2025-05-14 05:16:00-07",
            "valid_to": "2025-05-14 13:16:00-07",
            "readonly": true,
            "link": "\/sessions\/4665729213955833860\/?
↪key=fEGWO92C3IDki0EaMgpbpOffRFYSNhg6gYa6jYMp2zyfcMtFpIKdMr20S1jGKD3t",
            "created_at": "2025-05-14 05:18:11.152713-07",
            "modified_at": "2025-05-14 05:18:11.152713-07"
        }
    ]
}
```

24.2.4 Share Session

Request

Method	POST
Path	/api/v2/session/<session_id>/share
Headers	Content-Type: Application/json
Body	SessionShareModel

POST /api/v2/session/<session_id>/share

Example Request

```
curl -s -k -X POST \
     -H 'Authorization: proxycrypto' \
         -H 'Content-Type: application/json' \
         -d '{"valid_since": "2025-05-15T13:07:00.000Z","valid_to": "2025-05-
↪15T21:07:00.000Z","readonly": true}' \
     'https://10.31.92.108/api/v2/session/4665729213955833860/share'
```

Response

```
{
    "result": "success",
    "session_share": {
        "key": "gHJNP5SWFx08lvecW82uotFfxZVYJzOqhIbusRR9q1HmFLF1C7rd5xv7BywSmeOQ
↪"
    }
}
```

24.3 API v2: Revoking Sharing Sessions NEW

Fudo Enterprise enables sharing given session with another user.

24.3.1 Data Structures

Table 4: `SessionShareRevokeModel`

Attribute	Type	Required	Description
`session_id`	string	yes	ID of the session to OCR. Immutable.
`key`	string		Unique key identifying the shared session URL. Read-only.

24.3.2 Retrieve Available Attributes of the *SessionShareRevokeModel*

Request

Method	`GET`
Path	`/api/v2/objspec/session_share_revoke`

GET /api/v2/objspec/session_share_revoke

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/objspec/session_share_revoke'
```

24.3.3 Revoke Session Sharing URL

Request

Method	`POST`
Path	`/api/v2/session/<session_id>/share/revoke`
Headers	`Content-Type: Application/json`
Body	`SessionShareRevokeModel`

POST /api/v2/session/<session_id>/share/revoke

Example Request

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  -d '{"key":"yKaOzVjAoPZ6Hga6ECFEoVD2yKJXrrcPTDvhYFeUYNfxJaLs8D1piZdhFLIxivcT"}
↪' \
  'https://10.31.92.108/api/v2/session/4665729213955833860/share/revoke'
```

Response

```
{
    "result": "success"
}
```

24.4 API v2: Terminating Sessions NEW

In case the administrator notices access rights misuse, Fudo Enterprise allows to terminate the live session.

24.4.1 Data Structures

Table 5: `SessionTerminateModel`

Attribute	Type	Required	Description
`session_id`	string	yes	ID of the session to terminate.

24.4.2 Retrieve Available Attributes of the *SessionTerminateModel*

Request

Method	`GET`
Path	`/api/v2/objspec/session_terminate`

GET /api/v2/objspec/session_terminate

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/objspec/session_terminate'
```

24.4.3 Terminate Live Session

Request

Method	`POST`
Path	`/api/v2/session/<session_id>/terminate`

POST /api/v2/session/<session_id>/terminate

Example Request

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.31.92.108/api/v2/session/4665729213955833862/terminate'
```

Response

```
{
    "result": "success"
}
```

24.5 API v2: Session Text NEW

24.5.1 Data Structures

Table 6: `SessionTextModel`

Attribute	Type	Required	Description
`id`	string		Read-only. Unique identifier.
`session_id`	string		Read-only. ID of the session the text is linked to.
`text`	string		Read-only. Recorded session text (searchable representation).
`user_input`	boolean		Read-only. Whether the text was entered by the user.
`ms`	number		Read-only. Millisecond offset in the session.
`created_at`	datetime		Read-only. Timestamp of creation.
`created_on`	string		Read-only. Date of creation (UTC).
`modified_at`	datetime		Read-only. Timestamp of last modification.
`removed`	boolean		Read-only.

24.5.2 Retrieve Available Attributes of the *SessionTextModel*

Request

Method	GET
Path	/api/v2/objspec/session_text

GET /api/v2/objspec/session_text

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/objspec/session_text'
```

24.5.3 Get Recorded Text From Session

Request

Method	GET
Path	/api/v2/session/<session_id>/text

GET /api/v2/session/<session_id>/text

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  https://10.31.116.195/api/v2/session/8169529724050079760/text
```

Response

```
{
    "result": "success",
    "session_text": [
        {
            "id": "8169529724050079766",
            "session_id": "8169529724050079746",
            "text": "'address':6 'enter':5 'firefox':9 'getting':7 'google':4
↪'new':1 'started':8 'tab':2 'with':3",
            "user_input": false,
            "ms": 1425,
            "created_at": "2025-07-11 03:09:11.304285-07",
            "created_on": "80434736",
            "modified_at": "2025-07-11 03:09:11.304285-07"
        },
        {
            "id": "8169529724050079767",
```

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```
            "session_id": "8169529724050079746",
            "text": "'correction':1",
            "user_input": false,
            "ms": 1944,
            "created_at": "2025-07-11 03:09:15.284903-07",
            "created_on": "80434736",
            "modified_at": "2025-07-11 03:09:15.284903-07"
        },
        {
            "id": "8169529724050079768",
            "session_id": "8169529724050079746",
            "text": "'search':1",
            "user_input": false,
            "ms": 1973,
            "created_at": "2025-07-11 03:09:18.277803-07",
            "created_on": "80434736",
            "modified_at": "2025-07-11 03:09:18.277803-07"
        }
    ]
}
```


Note

This endpoint returns terminal text captured during the session, including user input and output, if applicable. Useful for text-based audit and search operations.

24.6 API v2: Session OCR NEW

Recorded RDP, VNC and rendered HTTP sessions can be processed and indexed for full-text search purposes.

24.6.1 Data Structures

Table 7: `SessionOCRModel`

Attribute	Type	Required	Description
`id`	string		Unique, read only object identifier.
`session_id`	string		ID of the session to OCR. Immutable.
`on_node`	string		Shows whether the session has been replicated across nodes, identified by serial numbers. Default value: `current_setting('fudo.serial', true)`
`ocred`	boolean		Read-only. Indicates whether session texts have been OCR-processed.
`lang`	string	yes	Specify OCR languages using `+` as a separator (e.g., `eng+deu+pol`).
`priority`	number	yes	
`created_on`	datetime		Read-only.
`created_at`	datetime		Read-only.
`modified_at`	datetime		Read-only.
`removed`	boolean		Read-only.

24.6.2 Retrieve Available Attributes of the *SessionOCRModel*

Request

Method	`GET`
Path	`/api/v2/objspec/session_ocr`

GET /api/v2/objspec/session_ocr

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/objspec/session_ocr'
```

24.6.3 Check Session OCR Status

Request

Method	`GET`
Path	`/api/v2/session/<session_id>/ocr`

GET /api/v2/session/<session_id>/ocr

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
```

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```
  'https://10.31.92.108/api/v2/session/4782822804267466753/ocr'
{
```

Response


```
{
    "result": "success",
    "session_ocr": [
        {
            "id": "4665729213955833858",
            "session_id": "4665729213955833858",
            "on_node": "83329531",
            "ocred": true,
            "lang": "eng+deu+pol",
            "priority": 1,
            "created_on": "83329531",
            "created_at": "2025-05-14 03:22:32.367319-07",
            "modified_at": "2025-05-14 03:24:58.1089-07"
        }
    ]
}
```


24.6.4 Process Session for OCR

Note

- The list of available OCR language codes can be retrieved using the internal API endpoint `GET /api/v2/internal/ocr_lang`.
- The response contains language identifiers (`value`) and their human-readable names (`label`), which should be used when configuring OCR-based session analysis.

Request

Method	`POST`
Path	`/api/v2/session/<session_id>/ocr`
Headers	`Content-Type: Application/json`
Body	`SessionOCRModel`

POST /api/v2/session/<session_id>/ocr

Example Request

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  -d '{"lang": "eng+deu+pol","priority":1}' \
  'https://10.31.92.108/api/v2/session/4665729213955833858/ocr'
```

Response

```
{
    "result": "success",
    "session_ocr": {
        "id": "4665729213955833858"
    }
}
```

24.7 API v2: Session Comment NEW

24.7.1 Data Structures

Table 8: `SessionCommentModel`

Attribute	Type	Required	Description
`id`	string		Read-only. Unique.
`parent_id`	string		Immutable.
`session_id`	string	yes	ID of the session to comment. Immutable.
`text`	string	yes	Text content of the session comment.
`start_at`	datetime	yes	Value format: time. Expensive to use.
`finish_at`	datetime	yes	Value format: time. Expensive to use.
`created_at`	datetime		Read-only. Timestamp of creation.
`modified_at`	datetime		Read-only. Timestamp of modification.
`modified_by`	string		Read-only.
`modified_by_na`	string		Read-only. Expensive to use.
`removed`	boolean		Read-only.

24.7.2 Retrieve Available Attributes of the *SessionCommentModel*

Request

Method	`GET`
Path	`/api/v2/objspec/session_comment`

GET /api/v2/objspec/session_comment

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/objspec/session_comment'
```

24.7.3 Get Session Comments

Request

Method	`GET`
Path	`/api/v2/session/<session_id>/comment`

GET /api/v2/session/<session_id>/comment

Example Request

```
curl -s -k -X GET \
     -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
     'https://10.31.92.108/api/v2/session/8169529724050079753/comment'
```

Response


```
{
    "result": "success",
    "session_comment": [
        {
            "id": "8169529724050079745",
            "session_id": "8169529724050079753",
            "text": "Comment no 1",
            "start_at": "00:00:14",
            "finish_at": "00:00:15",
            "created_at": "2025-07-08 14:19:29.001496-07",
            "modified_at": "2025-07-08 14:19:29.001496-07",
            "modified_by": "8169529724050079745",
            "modified_by_name": "admin"
        },
        {
            "id": "8169529724050079746",
            "session_id": "8169529724050079753",
            "text": "Comment no 2",
            "start_at": "00:00:26",
            "finish_at": "00:00:27",
            "created_at": "2025-07-08 14:19:57.31709-07",
            "modified_at": "2025-07-08 14:19:57.31709-07",
            "modified_by": "8169529724050079745",
            "modified_by_name": "admin"
        }
    ]
}
```


24.7.4 Get Session Comment by ID

Request

Method	`GET`
Path	`/api/v2/session/<session_id>/comment/<id>`

GET /api/v2/session/<session_id>/comment/<id>

Example Request

```
curl -s -k -X GET \
     -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
```

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```
    'https://10.31.92.108/api/v2/session/8169529724050079753/comment/
↪8169529724050079746'
```

Response

```
{
    "result": "success",
    "session_comment": [
        {
            "id": "8169529724050079746",
            "session_id": "8169529724050079753",
            "text": "Comment no 2",
            "start_at": "00:00:26",
            "finish_at": "00:00:27",
            "created_at": "2025-07-08 14:19:57.31709-07",
            "modified_at": "2025-07-08 14:19:57.31709-07",
            "modified_by": "8169529724050079745",
            "modified_by_name": "admin"
        }
    ]
}
```

24.7.5 Add Session Comment

Request

Method	`POST`
Path	`/api/v2/session/<session_id>/comment`
Headers	`Content-Type: Application/json`
Body	`SessionCommentModel`

POST /api/v2/session/<session_id>/comment

Example Request

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  https://10.31.92.108/api/v2/session/4665729213955833865/comment \
  -d '{"text": "Text content of the session comment.","start_at":"00:01:00",
↪"finish_at":"00:01:00"}'
```

Response

```
{
    "result": "success",
    "session_comment": {
        "id": "4665729213955833859"
    }
}
```

24.7.6 Modify Session Comment

Request

Method	PATCH
Path	/api/v2/session/<session_id>/comment/<id>
Headers	Content-Type: Application/json
Body	SessionCommentModel

PATCH /api/v2/session/<session_id>/comment/<id>

Example Request

```
curl -s -k -X PATCH \
     -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
         -H 'Content-Type: application/json' \
         https://10.31.92.108/api/v2/session/8169529724050079753/comment/
↪8169529724050079746 \
         -d '{"text": "Changed session comment content.","start_at":"00:01:00",
↪"finish_at":"00:01:00"}'
```

Response

```
{
    "result": "success"
}
```

24.7.7 Delete Session Comment

Request

Method	DELETE
Path	/api/v2/session/<session_id>/comment/<id>

DELETE /api/v2/session/<session_id>/comment/<id>

Example Request

```
curl -s -k -X DELETE \
     -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
     'https://10.31.92.108/api/v2/session/8169529724050079753/comment/
↪8169529724050079746'
```

Response

```
{
    "result": "success"
}
```

24.8 API v2: Sessions Approval NEW

Note

To allow users to accept or reject access requests, the Safe must have the `require_confirmation` attribute set to `true`. This setting enables the approval workflow for access requests.

24.8.1 Data Structures

Approve Object Specification

Table 9: `SessionApproveModel`

Attribute	Type	Required	Description
`session_id`	string	yes	ID of the session to approve.

24.8.2 Retrieve Available Attributes of the *SessionApproveModel*

Request

Method	`GET`
Path	`/api/v2/objspec/session_approve`

GET /api/v2/objspec/session_approve

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/objspec/session_approve'
```

Reject Object Specification

Table 10: `SessionRejectModel`

Attribute	Type	Required	Description
`session_id`	string	yes	ID of the session to reject.
`reason`	string	yes	The reason why the session is rejected.
`block_user`	boolean; default value `false`		Indicates whether to block the user who established the session.

24.8.3 Retrieve Available Attributes of the *SessionRejectModel*

Request

Method	`GET`
Path	`/api/v2/objspec/session_reject`

GET /api/v2/objspec/session_reject

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/objspec/session_reject'
```

24.8.4 Approving Session

Request

Method	POST
Path	/api/v2/session/<session_id>/approve

POST /api/v2/session/<session_id>/approve

Example Request

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.31.92.108/api/v2/session/4665729213955833862/approve'
```

Response

```
{
    "result": "success"
}
```

24.8.5 Rejecting Session

Request

Method	POST
Path	/api/v2/session/<session_id>/reject

POST /api/v2/session/<session_id>/reject

Example Request

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  https://10.31.92.108/api/v2/session/4665729213955833862/reject \
  -d '{"reason": "CODE 1.12", "block_user":true}'
```

Response

```
{
    "result": "success"
}
```

24.9 API v2: Restoring Session NEW

If a session's backup version is stored outside of Fudo Enterprise, it can be downloaded to the local Fudo Enterprise instance using the **Restore** option.

24.9.1 Data Structures

Table 11: `SessionRestoreModel`

Attribute	Type	Required	Description
`session_id`	string	yes	Immutable. ID of the session to restore.

24.9.2 Retrieve Available Attributes of the *SessionRestoreModel*

Request

Method	`GET`
Path	`/api/v2/objspec/session_restore`

GET /api/v2/objspec/session_restore

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/objspec/session_restore'
```

24.9.3 Restoring Session

Request

Method	`POST`
Path	`/api/v2/session/<session_id>/restore`

POST /api/v2/session/<session_id>/restore

Example Request

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  https://10.31.116.195/api/v2/session/8169529724050079760/restore
```

Response

```
{
    "result": "success"
}
```

24.10 API v2: Session Last Activity NEW

24.10.1 Data Structures

Table 12: `SessionActivityModel`

Attribute	Type	Required	Description
`session_id`	string	yes	ID of the session. Read-only.
`last_activity_`	number		Indicates how many seconds have passed since the session's last activity. Read-only.
`last_activity_`	string		The absolute timestamp of the session's last activity, formatted according to RFC 3339.
`unavailable`	boolean	yes	Indicates whether the session's last activity time is unavailable—either because the session has ended or is running on a different node. Read-only.

24.10.2 Retrieve Available Attributes of the *SessionActivityModel*

Request

Method	`GET`
Path	`/api/v2/objspec/session_terminate`

GET /api/v2/objspec/session_terminate

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/objspec/session_terminate'
```

24.10.3 Get Get Session Last Activity

Request

Method	`GET`
Path	`/api/v2/session/<session_id>/last_activity`

GET /api/v2/session/<session_id>/last_activity

Example Request

```
curl -s -k -X GET \
     -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
     'https://10.31.92.108/api/v2/session/4665729213955833864/last_activity'
```

Response

```
{
    "last_activity_age": 6,
    "last_activity_at": "2025-05-14T13:32:43.819802+00:00",
    "unavailable": false,
    "result": "success"
}
```


Response if the session has ended


```
{
    "last_activity_age": null,
    "last_activity_at": null,
    "unavailable": true,
    "result": "success"
}
```


24.11 API v2: Session Data Replication NEW

Additionally to automated session data replication, Fudo Enterprise enables on-demand replication to Fudo Enterprise instances to which the given data is not replicated automatically.

24.11.1 Data Structures

Table 13: `SessionReplicaModel`

Attribute	Type	Required	Description
`id`	string	Read-only. Unique identifier. Protected.	
`session_on`	string	yes	Serial number of the node on which the session has been replicated. The value `archive` indicates that the session is stored as a backup. Immutable. Uniqueness is required in the combination of attribute `session_on` with attribute `session_id`.
`session_id`	string	yes	ID of the session. Immutable. Uniqueness is required in the combination of attribute `session_id` with attribute `session_on`.
`fully_replicat`	boolean; default value `false`	yes	Read-only.
`backup_id`	string		Backup ID, available when the `session_on` attribute is set to `archive`. Read-only.
`dump_directory`	string		Read-only. Protected.
`external_direc`	string		Directory where session backup has been saved. Read-only. Expensive to use.
`node_name`	string		Name of the node on which the session has been replicated. Read-only. Expensive to use.
`backup_name`	string		Read-only. Expensive to use.
`created_at`	datetime	Datetime of the record creation. Read-only.	
`modified_at`	datetime	Datetime of the record modification. Read-only.	
`removed`	boolean	Read-only.	

24.11.2 Retrieve Available Attributes of the *SessionReplicaModel*

Request

Method	`GET`
Path	`/api/v2/objspec/session_replica`

GET /api/v2/objspec/session_replica

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/objspec/session_replica'
```

24.11.3 Get Session Replication Details

Request

Method	`GET`
Path	`/api/v2/session/<session_id>/replica`

GET /api/v2/session/<session_id>/replica

Example Request

```
curl -s -k -X GET \
     -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
     'https://10.31.92.108/api/v2/session/4665729213955833864/replica'
```

Response

```
{
    "result": "success",
    "session_replica": [
        {
            "session_on": "83329531",
            "session_id": "4665729213955833864",
            "fully_replicated": true,
            "created_at": "2025-05-14 06:32:04.355502-07",
            "modified_at": "2025-05-14 06:32:04.355502-07"
        }
    ]
}
```

24.11.4 Process Session Replication

Request

Method	`POST`
Path	`/api/v2/session/<session_id>/replica`
Headers	`Content-Type: Application/json`
Body	`SessionReplicaModel`

POST /api/v2/session/<session_id>/replica

Example Request

```
curl -s -k -X POST \
  -H 'Authorization: proxycrypto' \
  -H 'Content-Type: application/json' \
  -d '{"session_on": "83329531"}' \
  'https://10.31.92.108/api/v2/session/4665729213955833858/replica'
```

Response

```
{
    "result": "success"
}
```

24.12 API v2: Session Timestamping NEW

Note

To timestamp sessions, first you have to enable and configure the timestamping feature. Go to **Settings** > **System** > **Timestamping**. For more information refer to the Timestamping section of the Fudo Enterprise Documentation.

24.12.1 Data Structures: *SessionTimestampModel*

Table 14: `SessionTimestampModel`

Attribute	Type	Required	Description
`session_id`	string	yes	ID of the session to timestamp. Immutable.
`trusted_timest`	string		Timestamp details for the session. Read-only.

24.12.2 Retrieve Available Attributes of the *SessionTimestampModel*

Request

Method	`GET`
Path	`/api/v2/objspec/session_timestamp`

GET /api/v2/objspec/session_timestamp

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/objspec/session_timestamp'
```

24.12.3 Data Structures: *TimestampModel*

Table 15: `TimestampModel`

Attribute	Type	Required	Description
`enabled`	boolean		Indicates whether timestamping is enabled.
`provider`	string{`certum kir`, `pwpw`}		
`pkcs12`	string		PKCS12 file. Protected. Requires `pkcs12_passphrase` attribute.
`pkcs12_passphr`	string	Required by `pkcs12`	Passphrase to use to decrypt PKCS12 file. Protected.
`certificate`	string		Timestamp certificate. Read-only.
`expire_after`	string		Timestamp certificate expiration datetime. Format RFC3339. Read-only.

24.12.4 Retrieve Available Attributes of the *TimestampModel*

Request

Method	`GET`
Path	`/api/v2/objspec/timestamping`

GET /api/v2/objspec/timestamping

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/objspec/timestamping'
```

24.12.5 Get Session Timestamping Details

Request

Method	`GET`
Path	`/api/v2/session/<session_id>/timestamp`

GET /api/v2/session/<session_id>/timestamp

Example Request

```
curl -s -k -X GET \
     -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
     'https://10.31.92.108/api/v2/session/4665729213955833864/timestamp'
```

Response: Session without timestamp

```
{
    "result": "failure",
    "message": "The session does not have a trusted timestamp."
}
```

Response: Timestamped session

```

```

24.12.6 Timestamp Session

Request

Method	`POST`
Path	`/api/v2/session/<session_id>/timestamp`
Headers	`Content-Type: Application/json`
Body	`SessionTimestampModel`

POST /api/v2/session/<session_id>/timestamp

Example Request

```
curl -s -k -X POST \
  -H 'Authorization: proxycrypto' \
  'https://10.31.92.108/api/v2/session/4665729213955833858/timestamp'
```

Response: Timestamping not configured

```
{
    "result": "failure",
    "message": "Sessions timestamping is disabled."
}
```

Response: Timestamping configured

```
{
    "result": "failure",
    "message": "Sessions timestamping is disabled."
}
```

24.12.7 Delete Session Timestamping

Request

Method	DELETE
Path	/api/v2/session/<session_id>/timestamp

DELETE /api/v2/session/<session_id>/timestamp

Example Request

```
curl -s -k -X DELETE \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.31.87.227/api/v2/session/4665729213955833858/timestamp'
```

Response

```
{
    "result": "success"
}
```

24.13 API v2: Session Download NEW

Request

Method	POST
Path	/api/v2/session/<session_id>/download
Headers	Content-Type: Application/json
Body	SessionDownloadModel

POST /api/v2/session/<session_id>/download

Example Request

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  https://10.31.92.108/api/v2/session/4665729213955833865/download \
  -d '{"format": "divx5", "resolution": "hd720"}'
```

Response

```
{
    "result": "success"
}
```

Note

To check available download formats for session recordings, you can use the following internal endpoint: GET /api/v2/internal/session/<session_id>/download_formats. Please note that this is an **internal endpoint**, and its availability and behavior are **not guaranteed to remain stable** across future versions of the API.

24.14 API v2: Session Backup

24.14.1 Data Structures

Table 16: `SessionBackupModel`

Attribute	Type	Description
`session_id`	string	ID of the session to backup. Requires `backup_id: {}` or `backup_name: {}`.
`session_ids`	string-array	IDs of the sessions to backup. Requires `backup_id: {}` or `backup_name: {}`.
`backup_id`	string	ID of the backup target. Requires `session_id: {}` or `session_ids: {}`.
`backup_name`	string	Name of the backup target. Requires `session_id: {}` or `session_ids: {}`.

24.14.2 Retrieve Available Attributes of the *SessionBackupModel*

Request

Method	`GET`
Path	`/api/v2/objspec/session_backup`

GET /api/v2/objspec/session_backup

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/objspec/session_backup'
```

24.14.3 Mark Existing Session for Back Up

Request

Method	`POST`
Path	`/api/v2/session/<session_id>/backup/<backup_id>`

Example Request

POST /api/v2/session/<session_id>/backup/<backup_id>

Request

Method	`POST`
Path	`/api/v2/session_backup`
Headers	`Content-Type: Application/json`
Body	`SessionBackupModel`

Example Request

PATCH /api/v2/session_backup

```
{
"backup_name": "Backup_Target_Name",
"session_ids": [
        "23456789012345678901",
        "23456789012345678911"
]
}
```

Response

```
{
"result": "success",
"session_ids": [
        "23456789012345678901",
        "23456789012345678911"
        ]
}
```

24.15 API v2: Session SCP File NEW

24.15.1 Data Structures

Table 17: `ScpFileModel`

Attribute	Type	Required	Description
`id`	string		Read-only. Unique identifier.
`session_id`	string		Read-only. Identifier of the session to which the file transfer belongs.
`filename`	string		Read-only. Name of the file.
`file_size`	number		Read-only. Size of the file, in bytes.
`file_origin`	string		Read-only. Origin of the file. Can be either `client` or `server`.
`current_node`	string		Read-only. Indicates if the file is available on the current node.
`created_at`	datetime		Read-only. Timestamp of file registration.

24.15.2 Retrieve Available Attributes of the *ScpFileModel*

Request

Method	`GET`
Path	`/api/v2/objspec/scp_file`

GET /api/v2/objspec/scp_file

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/objspec/scp_file'
```

24.15.3 Get SCP File Transfer List for a Session

Request

Method	GET
Path	/api/v2/session/<session_id>/scp_file

GET /api/v2/session/<session_id>/scp_file

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/session/8673932882315575319/scp_file'
```

Response

```
{
    "scp_file": [
        {
            "id": "0",
            "session_id": "8673932882315575319",
            "filename": "export_import_configuration.txt",
            "file_size": 307175,
            "file_origin": "client",
            "current_node": true,
            "created_at": "2025-07-19 09:26:33.605208-07"
        }
    ],
    "result": "success"
}
```

24.15.4 Download SCP File Content by Session and File ID

Request

Method	GET
Path	/api/v2/session/<session_id>/scp_file/<id>

GET /api/v2/session/<session_id>/scp_file/<id>

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/session/8673932882315575319/scp_file/0'
```

Response

```
SCP file content.
```

Note

The endpoint returns raw file content. The response body contains the plain contents of the file identified by file `<id>`.

CHAPTER

TWENTYFIVE

API V2: ACCESS REQUEST

25.1 Data Structures

Table 1: `AccessRequestModel`

Attribute	Type	Required	Description
`id`	string		Unique and read-only object Identifier
`activated`	boolean		Read-only
`immediate_interval`	number {1-24}	if `type` == `immediate`	The amount of time the user will have access to the account, expressed in hours and counted from the moment the session is initiated.
`starts_at`	string	if `type` == `scheduled`	The time from which the access period starts.
`expires_at`	string	if `type` == `scheduled`	The time at which the access expires.
`reason`	string	yes	
`revoke_reason`	string	yes	
`required_votes`	number		Read-only. Number of votes required to acquire access to the account.
`status`	string {expired, granted, pending, rejected, revoked}		Read-only; expensive to use.
`type`	string {immediate, scheduled, preview}	yes	
`account_id`	string		Read-only; expensive to use. Requires `read` right on object type `account` for `GET` requests.
`account_name`	string		Read-only; expensive to use.
`safe_id`	string		Read-only; expensive to use. Requires `read` right on object type `safe` for `GET` requests.

continues on next page

Table 1 – continued from previous page

Attribute	Type	Required	Description
safe_name	string		Read-only; expensive to use.
pool_id	string		Read-only; expensive to use. Requires read right on object type pool for GET requests.
pool_name	string		Read-only; expensive to use.
protocol	string		Read-only; expensive to use.
server_id	string		Read-only; expensive to use. Requires read right on object type server for GET requests.
server_name	string		Read-only; expensive to use.
listeners	object-array		Read-only; expensive to use. JSON object array containing id, mode, name, hidden status, builtin status, and protocol of assigned listeners.
listener_ids	number-array		Read-only; expensive to use.
listener_names	string-array		Read-only; expensive to use.
user_id	string	yes	Immutable; read-only; expensive to use. Requires read right on object type user for GET requests.
user_domain	string		Read-only; expensive to use.
user_name	string		Read-only; expensive to use.
votes	object-array		Read-only; expensive to use. JSON object array containing reason, user_id, acceptance status, user_name, user_role, and user_domain of the voting user.
webclient	boolean		Read-only; expensive to use. Indicates if access is available via the web client.
created_at	datetime		Read-only. Timestamp of creation.
modified_at	datetime		Read-only. Timestamp of modification.
removed	boolean		Read-only.

25.2 Retrieve Available Attributes of the *AccessRequestModel*

Request

Method	GET
Path	/api/v2/objspec/access_request

Table 2: AccessRequestVoteModel

Attribute	Type	Required	Description
id	string		Unique and read-only object Identifier

continues on next page

Table 2 – continued from previous page

Attribute	Type	Required	Description
access_request_id	string	yes	Immutable. Uniqueness is required in the combination of attribute access_request_id with attribute user_id.
accepted	boolean	yes	
reason	string	if accepted == false	
user_id	string	yes	Immutable; protected; read-only; expensive to use. Uniqueness is required in the combination of attribute user_id with attribute access_request_id. Requires read right on object type user for POST requests.
created_at	datetime		Read-only. Timestamp of creation.
modified_at	datetime		Read-only. Timestamp of modification.
removed	boolean		Read-only.

25.3 Retrieve Available Attributes of the *AccessRequestVoteModel*

Request

Method	GET
Path	/api/v2/objspec/access_request_vote

Table 3: AccessRequestRevokeModel

Attribute	Type	Required	Description
access_request_id	string		
revoke_reason	string	yes	

25.4 Retrieve Available Attributes of the *AccessRequestRevokeModel*

Request

Method	GET
Path	/api/v2/objspec/access_request_revoke

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

25.5 Get Access Requests List

Request

Method	GET
Path	/api/v2/access_request

Example Request

GET /api/v2/access_request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/access_request'
```

25.6 Revoking Access Requests

Request

Method	POST
Path	/api/v2/access_request/<access_request_id>/revoke
Headers	Content-Type: Application/JSON
Body	AccessRequestRevokeModel

Example Request

POST /api/v2/access_request/<id>/revoke

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/access_request/5620492334958379010/revoke' \
  -d'{"revoke_reason":"AD maintenance."}'
```

Response

```
{
    "result": "success"
}
```

25.7 Responding to a Pending Access Request

Request

Method	POST
Path	/api/v2/access_request/<access_request_id>/vote
Headers	Content-Type: Application/json
Body	AccessRequestVoteModel

Example Request

POST /api/v2/access_request/<id>/vote

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/access_request/5620492334958379011/vote' \
  -d'{"accepted":true}'
```

Response

```
{
    "result": "success"
}
```

CHAPTER

TWENTYSIX

API V2: REPORTS

This section describes the API endpoints related to report management. The reporting functionality is based on three core data models that represent report definitions, report subscriptions, and generated reports.

The following data models are used:

- `ReportModel` – represents a report generated on demand for a specific subset of sessions, defined by filtering parameters.
- `DefinedReportSubscriptionModel` – represents a user-defined subscription for automatic, periodic report generation.
- `DefinedReportModel` – represents a user-defined periodic report definition based on custom filtering parameters.

26.1 Data Structures: *ReportModel*

Table 1: `ReportModel`

Attribute	Type	Required	Description
`id`	string		Unique and read-only object Identifier
`title`	string		Report title.
`defined_report_id`	string		Defined report identifier.
`report_type`	string		Read-only. Expensive to use.
`generated_at`	string		Read-only. Report generated timestamp.
`created_by`	string		Identifier of the user who created the report.
`query_filter`	string		Query filter used to create the report.
`query_order`	string		Query order of returned values used to create the report.
`created_on`	string		Read-only.
`created_at`	datetime		Read-only. Timestamp of creation.
`modified_at`	datetime		Read-only. Timestamp of modification.
`removed`	boolean		Read-only

26.2 Retrieve Available Attributes of the *ReportModel*

Request

Method	`GET`
Path	`/api/v2/objspec/report`

26.3 Data Structures: *DefinedReportSubscriptionModel*

A report subscription is a configuration that enables automatic generation of a report for a user at defined intervals.

Table 2: `DefinedReportSubscriptionModel`

Attribute	Type	Required	Description
`id`	string		Unique and read-only report subscription identifier
`defined_report_id`	string		Defined report identifier.
`user_id`	string		Identifier of the user who created the report. Requires `read` right on the `user` object for GET, POST, and DELETE operations.
`period`	string {day, week, month, quarter, year}		Period of generating reports.
`created_by`	string		Identifier of the user who created the report.
`created_at`	datetime		Read-only. Timestamp of creation.
`modified_at`	datetime		Read-only. Timestamp of modification.
`removed`	boolean		Read-only

26.4 Retrieve Available Attributes of the *DefinedReportSubscriptionModel*

Request

Method	`GET`
Path	`/api/v2/objspec/defined_report_subscription`

26.5 Data Structures: *DefinedReportModel*

Table 3: `DefinedReportModel`

Attribute	Type	Required	Description
`id`	string		Unique and read-only object Identifier
`title`	string		Defined report title.
`type`	string		Immutable. Defined report type.
`query_filter`	string		Query filter used to create the report.
`query_order`	string		Query order of returned values used to create the report.
`created_by`	string		Immutable. Identifier of the user who created the report.
`created_at`	datetime		Read-only. Timestamp of creation.
`modified_at`	datetime		Read-only. Timestamp of modification.
`removed`	boolean		Read-only
`builtin`	boolean		Read-only; Expensive to use; If `true`, the object is not editable.
`hidden`	boolean		Read-only; Expensive to use; If `true`, the object is hidden in UI.

26.6 Retrieve Available Attributes of the *DefinedReportModel*

Request

Method	`GET`
Path	`/api/v2/objspec/defined_report`

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

26.7 Get List of Generated Reports

Request

Method	`GET`
Path	`/api/v2/report`

Example Request

GET /api/v2/report

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/report'
```

26.8 Get List of Predefined Report Definitions

Request

Method	GET
Path	/api/v2/report/defined

Example Request

GET /api/v2/report/defined

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/report/defined'
```

26.9 Get List of Subscriptions to Periodic Reports

Request

Method	GET
Path	/api/v2/report/subscription

Example Request

GET /api/v2/report/subscription

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/report/subscription'
```

26.10 Get or Download Report File

Request

Method	GET
Path	/api/v2/report/<id>/<ext>
Path	/api/v2/report/download/<id>/<ext>

You can use one of three available extensions: csv, pdf, or html.

Example Request

GET /api/v2/report/<id>/html

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/report/9124292845052624897/html'
```

Response

Report in HTML.

26.11 Subscribe to a Periodic Report

This endpoint creates a subscription for a periodic report for the currently authenticated user, enabling automatic report generation based on the configured schedule.

Request

Method	`POST`
Path	`/api/v2/report/subscription`
Headers	`Content-Type: Application/json`
Body	`DefinedReportSubscriptionModel`

In the table below are the `defined_report_id` values and their corresponding titles required to subscribe to a predefined periodic report.

Table 4: `ReportModel`

Value of `defined_report_id`	Periodic Report Type
5	System report
6	Account access report
7	Safe access report
8	Server access report
9	Session approvals by user
10	Session sharing invites by user
11	Session summary
12	Sessions by server report
13	User access report
14	User activity report
15	User privilege report
16	User report

Note

You can also check the list of available defined report ID's using the `GET /api/v2/report/defined` endpoint.

Example Request

POST /api/v2/report/subscription

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/report/subscription' \
  -d'{"period":"day","defined_report_id":"6"}'
```

Response

```
{
    "defined_report_subscription": {
        "id": "9124292845052624899"
    },
    "result": "success"
}
```

26.12 Create New Report Definition (Custom Filter)

This endpoint allows defining a new periodic report based on custom filtering parameters. The defined report is visible in the **Sessions** view under the **Custom filters** list and can later be used to create a report subscription.

Request

Method	`POST`
Path	`/api/v2/report/defined`
Headers	`Content-Type: Application/json`
Body	`DefinedReportModel`

Example Request

POST /api/v2/report/defined

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/report/defined' \
  -d'{
     "title": "TestingAAA",
     "type": "system",
             "query_filter": "created_at.ge(2025-12-09T12%3A00%3A51.564Z),
↪created_at.le(2026-01-10T12%3A00%3A51.564Z),subprotocol.iin(rdp),user_id.
↪in(1224979098644774913),retention_locked,!finished_at.isnull(),status.
↪iin(approved)",
             "query_order": "!finished_at"
  }'
```

Response

```
{
    "defined_report": {
        "id": "9124292845052624900"
    },
    "result": "success"
}
```

> **Note**
>
> For details about filtering, see *Parameters*.

26.13 Generate User Report on Demand

A report can be generated on demand for a specific subset of sessions, defined by filtering parameters.

> **Note**
>
> You can also check the list of available defined report ID's using the `GET /api/v2/report/defined` endpoint.

Request

Method	`POST`
Path	`/api/v2/report`
Headers	`Content-Type: Application/json`
Body	`ReportModel`

Example Request

POST /api/v2/report

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/report' \
  -d'{"criteria":[{"field":"protocol","value":"ssh"},{"field":"user","value":
↪"5620492334958379010"}]}'
```

Response

```
{
    "report": {
        "id": "5620492334958379016"
    },
    "result": "success"
}
```

26.14 Update Report Definition (Custom Filter)

Request

Method	PATCH
Path	/api/v2/report/defined/<id>
Headers	Content-Type: Application/json
Body	DefinedReportModel

Example Request

PATCH /api/v2/report/defined/<id>

```
curl -s -k -X PATCH \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/report/defined/9124292845052624900' \
  -d'{
              "title":"Updated Custom Report",
              "query_filter":"created_at.ge(2025-12-09T12%3A00%3A51.564Z),
↪created_at.le(2026-01-10T12%3A00%3A51.564Z),subprotocol.iin(rdp),user_id.
↪in(1224979098644774913),retention_locked,!finished_at.isnull(),status.
↪iin(approved)",
              "query_order": "!finished_at"
    }'
```

Response

```
{
    "result": "success"
}
```

26.15 Delete Generated User Report

Request

Method	DELETE
Path	/api/v2/report/<id>

Example Request

DELETE /api/v2/report/<id>

```
curl -s -k -X DELETE \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/report/9124292845052624902'
```

Response

```
{
    "result": "success"
}
```

26.16 Delete Report Definition (Custom Filter)

Request

Method	DELETE
Path	/api/v2/report/defined/<id>

Example Request

DELETE /api/v2/report/defined/<id>

```
curl -s -k -X DELETE \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/report/defined/9124292845052624900'
```

Response

```
{
    "result": "success"
}
```

26.17 Unsubscribe from a Recurring Report

Request

Method	DELETE
Path	/api/v2/report/subscription/<id>

Example Request

DELETE /api/v2/report/subscription/<id>

```
curl -s -k -X DELETE \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/report/subscription/9124292845052624902'
```

Response

```
{
    "result": "success"
}
```

CHAPTER

TWENTYSEVEN

API V2: USER PRODUCTIVITY ANALYTICS NEW

Fudo Enterprise provides comprehensive analytics on user productivity and session activity patterns.

27.1 Data Structures

Table 1: `ProductivityModel`

Attribute	Type	Required	Description
`user_id`	string		Unique user identifier. Read-only. Group-by enabled. Requires `read` capability on `user` object.
`user_name`	string		User name. Read-only. Group-by enabled.
`user_organizat`	string		User organization. Read-only. Group-by enabled.
`started_at`	datetime		Session start timestamp. Filter-only.
`active_time`	number		Time that user was active. Read-only. Expensive to use.
`total_time`	number		Total time of the session(s). Read-only. Expensive to use.
`idle_time`	number		Time user was inactive. Read-only. Expensive to use.
`productivity`	string		Productivity score/classification. Read-only. Expensive to use.
`session_count`	number		Number of sessions. Read-only. Expensive to use.
`server_count`	number		Number of unique servers accessed. Read-only. Expensive to use.
`daily_aggregat`	object-array		Daily aggregation of time properties and productivity for each day. Read-only. Hidden. Expensive to use.
`active`	boolean		User activity status. Read-only. Filter-only. Expensive to use.
`destination_ip`	string		Destination IP address. Filter-only.
`destination_po`	number		Destination port. Filter-only.
`ml_threat_leve`	number		Machine learning threat level. Filter-only.
`protocol`	string		Protocol used. Filter-only.
`replicated_on_`	string-array		List of nodes that session was fully replicated on. Filter-only. Read-only. Expensive to use.
`retention_lock`	boolean		Retention lock status. Filter-only.
`account_id`	string		Account identifier. Filter-only.
`listener_id`	string		Listener identifier. Filter-only.
`safe_id`	string		Safe identifier. Filter-only.
`server_id`	string		Server identifier. Filter-only.

27.2 Retrieve Available Attributes of the *ProductivityModel*

Request

Method	`GET`
Path	`/api/v2/objspec/productivity`

GET /api/v2/objspec/productivity

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w61877n1g06sk' \
  'https://10.31.124.76/api/v2/objspec/productivity'
```

27.3 Get User Productivity Analytics

Request

Method	GET
Path	/api/v2/productivity

GET /api/v2/productivity

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w61877n1g06sk' \
  'https://10.31.124.76/api/v2/productivity'
```

Response

```
{
    "result": "success",
    "productivity": [
        {
            "user_id": "8259601716597489665",
            "user_name": "john.doe",
            "user_organization": "IT Department",
            "active_time": 7200,
            "total_time": 8400,
            "idle_time": 1200,
            "productivity": "37.9844961240310078",
            "session_count": 5,
            "server_count": 2
        }
    ]
}
```

CHAPTER

TWENTYEIGHT

API V2: LISTENERS

Listener determines server connection mode (proxy, gateway, transparent, bastion) as well as its specifics.

28.1 Data Structures

Table 1: `ListenerModel`

Attribute	Type	Required	Description
`id`	string	yes	Read-only object identifier
`name`	string	yes	Unique listener's name
`blocked`	boolean; default value `false`	yes	
`reason`	string	if `blocked` == `true`	
`announcement`	string	no	
`ignore_case`	boolean; default value `false`	If `protocol` == `vnc` || `ssh`	
`legacy_crypto`	boolean; default value `false`	If `mode` == `tunnel` & `protocol` == `ssh` || `http` || `rdp` || `mysql` & `tls_enabled` == `true`	Enabling legacy cryptographic protocols and settings
`protocol`	string {http, modbus, mysql, rdp, ssh, system, tcp, tds, telnet, tn3270, tn5250, vnc}	yes	Immutable, case insensitive
`mode`	string {bastion, gateway, proxy, transparent, tunnel}	yes	Case insensitive
`listen_interfac`	string	If `mode` == `gateway` || `transparent`	Network interface for user connections
`listen_ip`	string; default value `0.0.0.0`	If `mode` == `bastion` || `proxy` || `tunnel`	IP address for user connections
`listen_port`	number	If `mode` == `bastion` || `proxy` || `tunnel`	Port number for user connections
`external_addres`	string	with `external_port`	Listener address to present in Access Gateway

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Table 1 – continued from previous page

Attribute	Type	Required	Description
external_port	number; value range from 1 to 65535	with external_address	Listener port to present in Access Gateway. Value format: port.
http_render	boolean; default value true	If protocol == http & mode == tunnel	Is graphical representation for HTTP(S) sessions enabled?
rdp	ListenerRDPAttributes	If protocol == rdp	RDP protocol properties
ssh	ListenerSSHAttributes	If protocol == ssh	SSH protocol properties
tds	ListenerTDSAttributes	If protocol == tds	TDS protocol properties
tls	ListenerTLSAttributes	If protocol == http || rdp	TLS protocol properties
created_at	datetime		Read-only
modified_at	datetime		Read-only
removed	boolean		Read-only
builtin	boolean		Read-only; Expensive to use; If true, the object is not editable.
hidden	boolean		Read-only; Expensive to use; If true, the object is hidden in UI.

Table 2: `ListenerRDPAttributes`

Attribute	Type	Required	Description
`rdp_nla_enabled`	boolean; default value `false`	if `mode == tunnel && protocol == rdp && tls_enabled == true`	Enables RDP Network Level Authentication (NLA).
`rdp_private_key`	string	if `mode == tunnel && protocol == rdp && tls_enabled == false`	RDP private key. Protected. Format: `private-key`.
`rdp_private_key_p`	string	if `rdp_private_key` is set	Passphrase to decrypt RSA private key. Protected.
`rdp_public_key`	string		RDP public key. Read-only. Expensive to retrieve. Requires `rdp_private_key` and either `mode == tunnel` or `protocol == rdp && tls_enabled == false`.

Table 3: `ListenerSSHAttributes`

Attribute	Type	Required	Description
`ssh_private_key`	string	if `mode == tunnel || protocol == ssh`	SSH private key. Protected. Format: `ssh-private-key`.
`ssh_private_key_p`	string	if `ssh_priva` is set	Passphrase to decrypt SSH private key. Protected.
`ssh_proxyjump`	boolean; default value `false`	if `protocol == ssh && mode == gateway || proxy || transpare || bastion`	Enables SSH ProxyJump function.
`ssh_public_key`	string		SSH public key. Read-only. Expensive to retrieve. Requires `protocol == ssh` or `mode == tunnel`.
`ssh_fingerprint_s`	string		SHA256 fingerprint of SSH key. Read-only. Expensive to retrieve. Requires `protocol == ssh` or `mode == tunnel`.

Table 4: `ListenerTDSAttributes`

Attribute	Type	Required	Description
`tds_cd_enabled`	boolean; default value `false`	if `mode == tunnel && protocol == tds`	Enables constrained delegation for TDS.
`tds_cd_spn`	string	if `tds_cd_en == true`	Service Principal Name (SPN) used for constrained delegation.
`tds_cd_keytab`	string	if `tds_cd_en == true`	Base64-encoded contents of keytab file for constrained delegation.

Table 5: `ListenerTLSAttributes`

Attribute	Type	Required	Description
`tls_enabled`	boolean; default value `true`	if `mode == gateway || proxy || transparent || bastion && protocol == http || mysql || rdp`	Enables TLS protocol.
`tls_private_key`	string	if `tls_enabled == true && protocol == http || mysql || rdp && tls_certificate` is set	TLS private key. Protected. Format: `private-key`.
`tls_private_key_p`	string	if `tls_private_key` is set	Passphrase to decrypt TLS private key. Protected.
`tls_certificate`	string	if `tls_enabled == true && protocol == http || mysql || rdp && tls_private_key` is set	TLS certificate. Format: `x509-chain`.
`tls_certificate_c`	string		Common Name (CN) from TLS certificate. Read-only. Expensive to retrieve. Requires TLS configuration.
`tls_certificate_f`	string		SHA1 fingerprint of TLS certificate. Read-only. Expensive to retrieve. Requires TLS configuration.
`tls_certificate_f`	string		SHA256 fingerprint of TLS certificate. Read-only. Expensive to retrieve. Requires TLS configuration.

28.2 Retrieve Available Attributes of the *ListenerModel*

Request

Method	`GET`
Path	`/api/v2/objspec/listener`

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

Refer to the *Batch operations* topic to create nested requests for operating on the Listener objects.

28.3 Get Listeners List

Request

Method	GET
Path	/api/v2/listener

Example Request

GET /api/v2/listener


```
    "result": "success",
"listener": [
    {
        "id": "1234138875067073217",
        "name": "rdp_list_fd_10647",
        "protocol": "rdp",
        "mode": "bastion",
        "listen_ip": "0.0.0.0",
        "listen_port": 3388,
        "blocked": false,
        "created_at": "2022-10-15 14:52:30.980597+02",
        "modified_at": "2022-10-15 14:52:30.980597+02",
        "legacy_crypto": false,
        "tls_enabled": true,
        "tls_certificate": "-----BEGIN CERTIFICATE-----\
↪nMIIE0DCCArigAwIBAgIUSGWBY/C...0w/BXGR\n-----END CERTIFICATE-----"
    },
    {
        "id": "1234138875067073219",
        "name": "telnet_proxy_3",
        "protocol": "telnet",
        "mode": "proxy",
        "listen_ip": "0.0.0.0",
        "listen_port": 2236,
        "blocked": false,
        "created_at": "2022-10-17 09:34:32.582169+02",
        "modified_at": "2022-10-17 09:34:32.582169+02"
    },
    {
        "id": "12348875067073220",
        "name": "mssql_proxy",
        "protocol": "tds",
        "mode": "proxy",
        "listen_ip": "0.0.0.0",
        "listen_port": 8874,
        "blocked": false,
```


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```
        "created_at": "2022-10-17 10:50:53.209773+02",
        "modified_at": "2022-10-17 10:50:53.209773+02" }]
```

28.4 Create a Listener

Request

Method	`POST`
Path	`/api/v2/listener`
Headers	`Content-Type: Application/json`
Body	`ListenerModel`

28.5 Get a Listener

Request

Method	`GET`
Path	`/api/v2/listener/<id>`

28.6 Modify a Listener

Request

Method	`PATCH`
Path	`/api/v2/listener/<id>`
Headers	`Content-Type: Application/json`
Body	`ListenerModel`

Example Request: Changing the Listener's Address

PATCH /api/v2/listener/<id>

```
{ "listen_ip": "10.0.2.0" }
```

Response

```
{ "result": "success" }
```

28.7 Delete a Listener

Request

Method	`DELETE`
Path	`/api/v2/listener/<id>`

CHAPTER

TWENTYNINE

API V2: BATCH REQUESTS

Fudo Enterprise allows using its API for sending a batch request by which an administrator can perform nested operations with different methods. Creating an account and assigning an authentication method to it or defining 100 servers in one request is possible with an endpoint `/batch`.

Note

The `/batch` endpoint is available to use on objects of API v2 only.

29.1 Data Structures

Table 1: `BatchModel`

Batch operation element	Possible values / Request variant	Description
`atomic`	`true`, `false`	Set a global value `atomic=true` to ensure that all requests within a batch operation are executed. In case of failure of any request, the entire operation will be reverted.
`variables`		Define variables to facilitate future referencing of responses.
`requests:`		Remember to give your request a unique ID that consist of characters matching any single character from the following set: lowercase letters (a-z), uppercase letters (A-Z), digits (0-9), hyphens (-), colons (:), or underscores (_).
	`method`	Use one of the available methods per request.
	`endpoint`	Use one of the available endpoints per request.
	`params`	Include optional URL parameters.
	`data`	Include optional attributes values or variables for the future responses of the previous requests.
	`atomic`	Override global `atomic=true` with a local `atomic=false`.

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

CHAPTER

THIRTY

CREATE BATCH OPERATION

Request

Method	`POST`
Path	`/api/v2/batch`
Headers	`Content-Type: application/json`
Body	`BatchModel`

POST /api/v2/batch

Example of a batch operation that contains four requests:

- `request0` returns a list of users' IDs and names, where the user's `name` == `test`,
- `request1` deletes the first user that was on the list of the `request0`'s response,
- `request2` creates a new user with `name` of the first user from the `request0`'s response and assigns a role `user` to it,
- `request3` assigns `password` as an authentication method for the user that was created in the `request2`

Example Request

```
{
  "requests": {
    "request0": {
      "method": "GET",
      "endpoint": "/user",
      "params": {
        "filter": "name.eq(test)",
        "fields": "id,name"
      }
    },
    "request1": {
      "method": "DELETE",
      "endpoint": "/user/{responses.request0.user[0].id}"
    },
    "request2": {
      "method": "POST",
      "endpoint": "/user",
      "data": {
```

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```
        "name": "{responses.request0.user[0].name}",
        "role": "user"
      }
    },
    "request3": {
      "method": "POST",
      "endpoint": "/user/{responses.request2.user.id}/authentication",
      "data": {
        "type": "password",
        "position": 0,
        "secret": "abcd.8"
      }
    }
  }
}
```

Response

```
{
    "result": "success",
    "responses": {
        "request0": {
            "result": "success",
            "status-code": 200,
            "user": [
                {
                    "id": "8511803295730237462",
                    "name": "test"
                }
            ]
        },
        "request1": {
            "result": "success",
            "status-code": 200
        },
        "request2": {
            "result": "success",
            "status-code": 201,
            "user": {
                "id": "8511803295730237463"
            }
        },
        "request3": {
            "result": "success",
            "status-code": 201,
            "user_authentication_method": {
                "id": "8511803295730237489"
            }
        }
```

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```
    }
}
```

CHAPTER

THIRTYONE

CREATE BATCH OPERATION USING VARIABLE

The example below demonstrates a batch operation with `"username": "jdoe"` variable defined. This variable was used to dynamically populate the `name` field in the `user_1` request. Next, the `user_auth` request includes `{responses.user_1.user.id}` (`{responses.<response-id>.user.id}`), which is a placeholder that will be replaced with the actual `id` value generated from the response of the `user_1` request.

Request

```
{
  "variables": {
    "username": "jdoe"
  },
  "requests": {
    "user_1": {
      "method": "POST",
      "endpoint": "/user",
      "data": {
        "name": "{variables.username}"
      }
    },
    "user_auth": {
      "method": "POST",
      "endpoint": "/user/{responses.user_1.user.id}/authentication",
      "data": {
        "type": "password",
        "position": 0,
        "secret": "test123"
      }
    }
  }
}
```

Response

```
{
    "result": "success",
    "responses": {
        "user_1": {
            "result": "success",
```

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```
            "status-code": 201,
            "user": {
                "id": "8511803295730237446"
            }
        },
        "user_auth": {
            "result": "success",
            "status-code": 201,
            "user_authentication_method": {
                "id": "8511803295730237442"
            }
        }
    }
}
```

31.1 Atomic Functionality

The example below demonstrates a batch operation that includes two requests (`user0` and `user1`) for creating two users, where `user0` request has invalid value (`not_defined`) set for the `role` attribute. While the global `atomic` function is enabled for the batch operation, it is disabled solely for the `user0` request. As a result, only user from the `user1` request will be created.

Example Request

```
{
  "atomic": true,
  "variables": {
    "user_name_0": "jdoe",
    "user_name_1": "jsmith"
  },
  "requests": {
    "user0": {
      "method": "POST",
      "endpoint": "/user",
      "atomic": false,
      "data": {
        "name": "{variables.user_name_0}",
        "role": "not_defined"
      }
    },
    "user1": {
      "method": "POST",
      "endpoint": "/user",
      "data": {
        "name": "{variables.user_name_1}",
        "role": "operator"
      }
    }
  }
```

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```
}
```

Response

```
{
    "result": "success",
    "responses": {
        "user0": {
            "result": "failure",
            "status-code": 400,
            "message": "Invalid value of attribute role: 'not_defined'
                (expected values=[ 'admin', 'operator', 'service', 'superadmin',
↪ 'user' ]).",
            "failing_attributes": [
                "role"
            ]
        },
        "user1": {
            "result": "success",
            "status-code": 201,
            "user": {
                "id": "8511803295730237444"
            }
        }
    }
}
```

CHAPTER

THIRTYTWO

API V2: NOTIFICATION FILTER

32.1 Data Structures

Table 1: `NotificationFilterModel`

Attribute	Type	Required	Description
`id`	string		Unique and read-only object Identifier
`user_id`	string	yes	Immutable. Uniqueness is required in the combination of attribute `user_id` with attributes `event_name`, `event_transport` and `safe_id`. Requires `read` right on object type `user` for `GET`, `POST`, and `DELETE` requests.
`safe_id`	string	yes	Immutable. Uniqueness is required in the combination of attribute `safe_id` with attributes `event_name`, `event_transport` and `user_id`. Requires `read` right on object type `safe` for `GET`, `POST`, and `DELETE` requests.

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Attribute	Type	Required	Description
`event_name`	string {safe_add_server, safe_add_user, safe_blocked, safe_create, safe_remove, safe_unblocked, server_blocked, server_create, server_remove, server_unblocked, user_blocked, user_create, user_remove, user_unblocked, session_finish, session_ml, session_regexp, session_start, session_waiting, session_inject_close, session_inject_open, disk_failure, filesystem_full, access_request_pending, access_request_accepted access_request_rejected}	yes	Case-insensitive. Immutable. Uniqueness is required in the combination of attribute `event_name` with attributes `event_transport, safe_id` and `user_id`.
`event_transpor`	string {mail, push, slack}	yes	Case-insensitive. Uniqueness is required in the combination of attribute `event_transport` with attributes `event_name, safe_id` and `user_id`.
`created_at`	datetime		Read-only. Timestamp of creation.
`modified_at`	datetime		Read-only. Timestamp of modification.
`removed`	boolean		Read-only

32.2 Retrieve Available Attributes of the *NotificationFilterModel*

Request

Method	`GET`
Path	`/api/v2/objspec/notification_filter`

To check allowed methods, available URL parameters and possible responses please refer to the

API Overview section.

32.3 Get Notifications List

Request

Method	`GET`
Path	`/api/v2/notification_filter`

Example Request

GET /api/v2/notification_filter`

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/notification_filter'
```

Response

```
{
    "result": "success",
    "notification_filter": {
        "id": "9124292845052624897",
        "user_id": "9124292845052624898",
        "safe_id": "9124292845052624898",
        "event_name": "access_request_accepted",
        "event_transport": "mail",
        "created_at": "2024-06-11 22:21:15.750371-07",
        "modified_at": "2024-06-11 22:21:15.750371-07"
    }
}
```

32.4 Get Notification Filter by ID

Request

Method	`GET`
Path	`/api/v2/notification_filter/<id>`

Example Request

GET /api/v2/notification_filter/<id>`

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/notification_filter/9124292845052624897'
```

Response

```
{
    "result": "success",
    "notification_filter": {
        "id": "9124292845052624897",
        "user_id": "9124292845052624898",
        "safe_id": "9124292845052624898",
        "event_name": "access_request_accepted",
        "event_transport": "mail",
        "created_at": "2024-06-11 22:21:15.750371-07",
        "modified_at": "2024-06-11 22:21:15.750371-07"
    }
}
```


32.5 Create Notification Filter

Request

Method	`POST`
Path	`/api/v2/notification_filter`
Headers	`Content-Type: Application/json`
Body	`NotificationFilterModel`

Example Request

POST /api/v2/notification_filter`

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/notification_filter' \
  -d'{"safe_id":"9124292845052624898","user_id":"9124292845052624903","event_
↪name":"safe_add_server","event_transport":"mail"}'
```

Response


```
{
    "result": "success",
    "notification_filter": {
        "id": "9124292845052624914"
    }
}
```


32.6 Deleting Notification Filter

Request

Method	`DELETE`
Path	`/api/v2/notification_filter/<id>`

Example Request

DELETE /api/v2/notification_filter/<id>`

```
curl -s -k -X DELETE \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/notification_filter/9124292845052624897'
```

Response

```
{
    "result": "success"
}
```

CHAPTER

THIRTYTHREE

API V2: OPENID CONNECT CONFIGURATION

OpenID Connect related endpoints help to create, modify, list and delete OpenID Connect configurations.

33.1 Data Structures

Table 1: `OpenIDModel`

Attribute	Type	Required	Description
`id`	string		Read-only, unique object Identifier.
`name`	string	yes	Case-insensitive, unique name of the configuration.
`enabled`	boolean	yes	Enabling configuration.
`bind_to`	string		Bind address.
`configuration_url`	string	yes	This URL is specific for every Identity Provider and allows identifying one for correct configuration.
`client_id`	string	yes	Client id available after the registration on selected provider.
`client_secret`	string	yes	Client secret available after the registration on selected provider. Protected.
`fudo_domain`	string		The domain used to identify the user on Fudo.
`username_mapping`	string		Username mapping is useful when users name has different naming convention.
`email_mapping`	string		Email mapping is useful when users name has different naming convention.
`tls_ca_certificate`	string		TLS CA certificate that signed the certificate of the server. Value-format: x509-certificate.
`tls_certificate`	string		TLS certificate of the server. Value-format: x509-certificate.
`created_at`	datetime		Read-only. Timestamp of creation.
`modified_at`	datetime		Read-only. Timestamp of modification.
`removed`	boolean		Read-only.

33.2 Retrieve Available Attributes of the *OpenIDModel*

Request

Method	`GET`
Path	`/api/v2/objspec/oidc`

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

33.3 Get Existing OpenID Connect Configurations List

Request

Method	`GET`
Path	`/api/v2/oidc`

Example Request

GET /api/v2/oidc`

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/oidc'
```

Response

```
{
    "result": "success",
    "oidc": [
        {
            "id": "9124292845052624897",
            "name": "OKTA",
            "enabled": true,
            "bind_to": "0.0.0.0",
            "configuration_url": "https:\/\/okta.com",
            "client_id": "1234567",
            "created_at": "2024-06-19 07:51:42.988336-07",
            "modified_at": "2024-06-19 07:51:42.988336-07"
        }
    ]
}
```

33.4 Get Existing OpenID Connect Configuration by ID

Request

Method	`GET`
Path	`/api/v2/oidc/<id>`

Example Request

GET /api/v2/oidc/<id>`

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/oidc/9124292845052624897'
```

Response

```
{
    "result": "success",
    "oidc": [
        {
            "id": "9124292845052624897",
            "name": "OKTA",
            "enabled": true,
            "bind_to": "0.0.0.0",
            "configuration_url": "https:\/\/okta.com",
            "client_id": "1234567",
            "created_at": "2024-06-19 07:51:42.988336-07",
            "modified_at": "2024-06-19 07:51:42.988336-07"
        }
    ]
}
```

33.5 Defining OpenID Connect Configuration

Request

Method	`POST`
Path	`/api/v2/oidc`
Headers	`Content-Type: Application/json`
Body	`OpenIDModel`

Example Request

POST /api/v2/oidc`

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/oidc' \
```

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```
  -d'{"name": "OKTA","enabled": true,"configuration_url":"https:\/\/okta.com",
↪"client_id":"1234567","client_secret":"Secret"}'
```

Response

```
{
    "result": "success",
    "oidc": {
        "id": "9124292845052624898"
    }
}
```

33.6 Modify OpenID Connect Configuration

Request

Method	PATCH
Path	/api/v2/oidc/<id>
Headers	Content-Type: Application/json
Body	OpenIDModel

Example Request

PATCH /api/v2/oidc/<id>`

```
curl -s -k -X PATCH \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/oidc/9124292845052624898' \
  -d'{"client_id":"1234567","client_secret":"Secret"}'
```

Response

```
{
    "result": "success",
    "oidc": {
        "id": "9124292845052624898"
    }
}
```

33.7 Deleting OpenID Connect Configuration

Request

Method	DELETE
Path	/api/v2/oidc/<id>

Example Request

DELETE /api/v2/oidc/<id>`

```
curl -s -k -X DELETE \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/oidc/9124292845052624897'
```

Response

```
{
    "result": "success"
}
```

CHAPTER

THIRTYFOUR

API V2: OPENID CONNECT USERS ASSIGNMENT

User related OpenID Connect endpoints help to create, modify, list and delete OpenID Connect configurations assignment to Users.

34.1 Data Structures

Table 1: `UserOpenIDModel`

Attribute	Type	Required	Description
`id`	string		Read-only. Protected. Unique identifier.
`user_id`	string	yes	Immutable. Uniqueness is required in the combination of attribute `user_id` with attribute `oidc_id`. Requires `read` right on object type `user` for `GET` requests, and `modify` right for `DELETE`, `PATCH`, and `POST` requests.
`oidc_id`	string	yes	Immutable. Uniqueness is required in the combination of attribute `oidc_id` with attribute `user_id`.
`oidc_sub`	string	yes	OpenID Connect sub claim.
`user_name`	string		Read-only. Expensive to use.
`user_domain`	string		Read-only. Expensive to use.
`user_email`	string		Read-only. Expensive to use.
`user_organization`	string		Read-only. Expensive to use.
`user_role`	string		Read-only. Expensive to use.
`oidc_name`	string		Read-only. Expensive to use.
`created_at`	datetime		Read-only. Timestamp of creation.
`modified_at`	datetime		Read-only. Timestamp of modification.
`removed`	boolean		Read-only.
`builtin`	boolean		Read-only; expensive to use; if `true`, the object is not editable.
`hidden`	boolean		Read-only; expensive to use; if `true`, the object is hidden in UI.

34.2 Retrieve Available Attributes of the *UserOpenIDModel*

Request

Method	`GET`
Path	`/api/v2/objspec/user_oidc`

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

34.3 Get the List of Existing OpenID Connect Configuration Assignments to Users

Request

Method	`GET`
Path	`/api/v2/user/oidc`

Example Request

GET /api/v2/user/oidc`

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/user/oidc'
```

Response


```
{
    "result": "success",
    "user_oidc": [
        {
            "user_id": "9124292845052624898",
            "oidc_id": "9124292845052624898",
            "oidc_sub": "John",
            "user_name": "User_1",
            "user_domain": "zw.local",
            "user_email": "user@fudosecurity.com",
            "user_role": "operator",
            "oidc_name": "OKTA2",
            "created_at": "2024-06-19 08:39:55.351137-07",
            "modified_at": "2024-06-19 08:39:55.351137-07",
            "builtin": false,
            "hidden": false
        }
    ]
}
```

34.4 Get Existing OpenID Connect Configuration Assigned to User

Request

Method	GET
Path	/api/v2/user/<user_id>/oidc/<oidc_id>

Example Request

GET /api/v2/user/<id>/oidc/<id>`

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/user/9124292845052624898/oidc/9124292845052624898'
```

Response


```
{
    "result": "success",
    "user_oidc": [
        {
            "user_id": "9124292845052624898",
            "oidc_id": "9124292845052624898",
            "oidc_sub": "John",
            "user_name": "User_1",
            "user_domain": "zw.local",
            "user_email": "user@fudosecurity.com",
            "user_role": "operator",
            "oidc_name": "OKTA2",
            "created_at": "2024-06-19 08:39:55.351137-07",
            "modified_at": "2024-06-19 08:39:55.351137-07",
            "builtin": false,
            "hidden": false
        }
    ]
}
```


34.5 Defining OpenID Connect Configuration Assignment to User

Request

Method	POST
Path	/api/v2/user/oidc
Headers	Content-Type: Application/json
Body	UserOpenIDModel

Example Request

POST /api/v2/user/oidc`

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/user/oidc' \
  -d'{"user_id":"9124292845052624898","oidc_id":"9124292845052624898","oidc_sub
↪":"John"}'
```

Response

```
{
    "result": "success"
}
```

34.6 Modify OpenID Connect Configuration Assignment to User

Request

Method	`PATCH`
Path	`/api/v2/user/<user_id>/oidc/<oidc_id>`
Headers	`Content-Type: Application/json`
Body	`UserOpenIDModel`

Example Request

PATCH /api/v2/user/<id>/oidc/<id>`

```
curl -s -k -X PATCH \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/user/9124292845052624898/oidc/9124292845052624898
↪' \
  -d'{"oidc_sub":"JohnD"}'
```

Response

```
{
    "result": "success"
}
```

34.7 Deleting OpenID Connect Configuration Assignment to User

Request

Method	`DELETE`
Path	`/api/v2/user/<user_id>/oidc/<oidc_id>`

Example Request

DELETE /api/v2/user/<id>/oidc/<id>`

```
curl -s -k -X DELETE \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/user/9124292845052624800/oidc/9124292845052624897'
```

Response

```
{
    "result": "success"
}
```

CHAPTER

THIRTYFIVE

API V2: EXTERNAL PASSWORD REPOSITORY

Fudo Enterprise supports external passwords repositories for managing passwords to monitored servers.

35.1 Data Structures

Table 1: `PassvnModel`

Attribute	Type	Required	Description
`id`	string		Unique, read-only object identifier.
`name`	string	yes	Unique, case insensitive object name
`url`	string	yes	URL to the passwords server's API
`type`	string {cyberark, laps, thycotic}	yes	Immutable
`login`	string	If `type` == `laps` || `thycotic`	
`secret`	string	If `type` == `laps` || `thycotic`	Protected
`tls_certificate`	string		Value format: x509-certificate
`cyberark_application_id`	string	If `type` == `cyberark`	
`cyberark_safe`	string	If `type` == `cyberark`	
`thycotic_secret_fmt`	string	If `type` == `thyhotic`	
`base_dn`	string	If `type` == `laps`	
`identity_certificate`	string		Value format: x509-certificate
`identity_key`	string		Protected. Value format: private-key
`identity_key_passphrase`	string	If `identity_ke` is set	Protected. Passphrase to use to decrypt private key.
`created_at`	datetime		Read-only

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Table 1 – continued from previous page

Attribute	Type	Required	Description
`modified_at`	datetime		Read-only
`removed`	string		Read-only

35.2 Retrieve Available Attributes of the *PassvnModel*

Request

Method	`GET`
Path	`/api/v2/objspec/passvn`

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

35.3 Create External Password Repository

Request

Method	`POST`
Path	`/api/v2/passvn`
Headers	`Content-Type: Application/json`
Body	`PassvnModel`

Example Request

POST /api/v2/passvn`

```
{
    "type": "laps",
    "name": "LAPS Test Name 2",
    "url": "ldaps://10.2.0.1:8636/",
    "login": "cn=admin,dc=fudosecurity,dc=lab",
    "secret": "passwordExample",
    "base_dn": "dc=fudosecurity,dc=lab"
}
```

Response

```
{
    "result": "success",
    "passvn": {
        "id": "123456789012345678"
    }
}
```

35.4 Get External Password Repositories List

Request

Method	GET
Path	/api/v2/passvn

Example Request

GET /api/v2/passvn`

Response

```
"result": "success",
"passvn": [
    {
        "id": "123456789012345679",
        "name": "LDAP Test Name",
        "url": "ldaps://10.2.0.100:8636/",
        "type": "laps",
        "login": "cn=admin,dc=fudosecurity,dc=lab",
        "base_dn": "dc=fudosecurity,dc=lab",
        "created_at": "2023-06-16 02:53:08.930597-07",
        "modified_at": "2023-06-16 02:53:08.930597-07"
    }
]
```

35.5 Get Information About External Password Repository by ID

Request

Method	GET
Path	/api/v2/passvn/<id>

Example Request

GET /api/v2/passvn/<id>`

Response

```
"result": "success",
"passvn": [
    {
        "id": "123456789012345679",
        "name": "LDAP Test Name",
        "url": "ldaps://10.2.0.100:8636/",
        "type": "laps",
        "login": "cn=admin,dc=fudosecurity,dc=lab",
        "base_dn": "dc=fudosecurity,dc=lab",
        "created_at": "2023-06-16 02:53:08.930597-07",
```

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```
        "modified_at": "2023-06-16 02:53:08.930597-07"
    }
]
```

35.6 Delete an External Password Repository Definition

Request

Method	`DELETE`
Path	`/api/v2/passvn/<id>`

35.7 Changing External Password Repository Configuration

Request

Method	`PATCH`
Path	`/api/v2/passvn/<id>`
Headers	`Content-Type: Application/json`
Body	`PassvnModel`

Example Request

PATCH /api/v2/passvn/<id>`

```
{
   "login": "cn=admin,dc=fudosecurity,dc=com",
   "base_dn": "dc=fudosecurity,dc=com"
}
```

Response

```
{
   "result": "success"
}
```

CHAPTER

THIRTYSIX

API V2: BACKUP

Fudo allows configuring multiple backup target destinations, where data can be stored. Each backup target can have S3, Backblaze, FTP, or SFTP as a destination place.

36.1 Data Structures

Table 1: `BackupModel`

Attribute	Type	Required	Description
`id`	string		Unique and read-only object Identifier
`name`	string	yes	Unique, case insensitive object name
`type`	string {backblaze, ftp, s3, sftp}	yes	Immutable, case insensitive
`backblaze_buck`	string	If `type == backblaze`	Backblaze bucket name.
`backblaze_dire`	string	If `type == backblaze`	Directory within the Backblaze bucket.
`backblaze_keyi`	string	If `type == backblaze`	Backblaze key ID.
`backblaze_appl`	string	If `type == backblaze`	Protected. Backblaze application key.
`ftp_address`	string	If `type == ftp`	FTP server address.
`ftp_username`	string	If `type == ftp`	FTP login username.
`ftp_password`	string	If `type == ftp` & `ftp_usern` provided	Protected. FTP password.
`ftp_directory`	string	If `type == ftp`	Target directory on the FTP server.
`s3_bucket`	string	If `type == s3`	S3 bucket name.

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Table 1 – continued from previous page

Attribute	Type	Required	Description
s3_directory	string	If type == s3	Directory within the S3 bucket.
s3_access_key_	string	If type == s3	AWS access key ID.
s3_secret_acce	string	If type == s3	Protected. AWS secret access key.
s3_endpoint	string	If type == s3	Custom S3 endpoint URL.
s3_region	string	If type == s3	AWS region name.
sftp_address	string	If type == sftp	SFTP server address.
sftp_port	number; default value 22	If type == sftp	SFTP server port.
sftp_username	string	If type == sftp	SFTP login username.
sftp_userkey	string	If type == sftp	Protected. User SSH private key.
sftp_userkey_p	string	If sftp_user provided	Protected. Passphrase to decrypt user SSH private key.
sftp_directory	string	If type == sftp	Directory on the SFTP server.
sftp_serverkey	string	If type == sftp	Protected. SFTP server SSH public key.
created_at	datetime		Read-only. Creation timestamp.
modified_at	datetime		Read-only. Modification timestamp.
removed	boolean		Read-only.

36.2 Retrieve Available Attributes of the *BackupModel*

Request

Method	GET
Path	/api/v2/objspec/backup

GET /api/v2/objspec/backup

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/objspec/backup'
```

CHAPTER

THIRTYSEVEN

CREATE BACKUP TARGET

Request

Method	`POST`
Path	`/api/v2/backup`
Headers	`Content-Type: application/json`
Body	`BackupModel`

Example Request

POST /api/v2/backup

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/backup' \
  -d'{"name": "FTP_Backup","type": "ftp","ftp_address": "10.0.130.100"}'
```

Response

```
{
    "result": "success",
    "backup": {
        "id": "801640733671948290"
    }
}
```

CHAPTER

THIRTYEIGHT

GET BACKUP DEFINITIONS LIST

Request

Method	`GET`
Path	`/api/v2/backup`

Example Request

GET /api/v2/backup


```
"result": "success",
"backup": [
    {
        "id": "9124292845052624897",
        "name": "FTP_Backup",
        "type": "ftp",
        "path": "",
        "created_at": "2024-06-16 13:50:42.355762-07",
        "modified_at": "2024-06-16 14:29:47.217872-07"
    },
    {
        "id": "9124292845052624898",
        "name": "Backblaze_Backup",
        "type": "backblaze",
        "path": "myBucket\/",
        "created_at": "2024-06-16 14:29:47.226305-07",
        "modified_at": "2024-06-16 14:29:47.226305-07"
    }
]
```

CHAPTER

THIRTYNINE

GET A BACKUP DEFINITION BY ID

Request

Method	`GET`
Path	`/api/v2/backup/<id>`

GET /api/v2/backup/<id>

CHAPTER

FORTY

ASSIGN BACKUP DEFINITION TO SESSION

Request

Method	`POST`
Path	`/api/v2/session/<session_id>/backup/<backup_id>`

POST /api/v2/session/<session_id>/backup/<backup_id>

CHAPTER

FORTYONE

DELETE BACKUP DEFINITION

Request

Method	`DELETE`
Path	`/api/v2/backup/<id>`

DELETE /api/v2/backup/<id>

CHAPTER

FORTYTWO

API V2: EXTERNAL STORAGE NEW

Fudo Enterprise enables management of external storage devices via fiber channel cards.

42.1 Data Structures

Table 1: `ExternalStorageModel`

Attribute	Type	Required	Description
`interface_stat`	object-array		Fiber channel cards status. Read-only.
`external_wwns`	object-array		List of available external storage devices. Read-only.
`connection_mod`	string	yes	Fiber channel cards operating mode. Possible values: `failover`, `loadbalancer`.
`wwn_to_configu`	string		WWN of selected external storage device to configure.
`current_storag`	string		WWN of configured external storage device. Read-only.
`is_configured`	boolean		Is external storage configured? Read-only.
`occupancy`	object		Occupancy of configured external storage device: allocated, capacity, free, size. Read-only.

42.2 Retrieve Available Attributes of the *ExternalStorageModel*

Request

Method	`GET`
Path	`/api/v2/objspec/external_storage`

GET /api/v2/objspec/external_storage

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w61877n1g06sk' \
  'https://10.31.124.76/api/v2/objspec/external_storage'
```

42.3 Get External Storage Information

Request

Method	GET
Path	/api/v2/external_storage

GET /api/v2/external_storage

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w61877n1g06sk' \
  'https://10.31.124.76/api/v2/external_storage'
```

42.4 Get Specific External Storage Device

Request

Method	GET
Path	/api/v2/external_storage/<id>

GET /api/v2/external_storage/<id>

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w61877n1g06sk' \
  'https://10.31.124.76/api/v2/external_storage/5620492334958379016'
```

42.5 Configure External Storage

Request

Method	POST
Path	/api/v2/external_storage
Headers	Content-Type: Application/json
Body	ExternalStorageModel

POST /api/v2/external_storage

Example Request

```
curl -s -k -X POST \
     -H 'Authorization: sgfeea6jsaz4mum9su8w61877n1g06sk' \
         -H 'Content-Type: application/json' \
         -d '{"connection_mode": "failover", "wwn_to_configure":
↪"50:01:43:80:03:6f:8e:a0"}' \
     'https://10.31.124.76/api/v2/external_storage'
```

42.6 Delete External Storage Configuration

Request

Method	DELETE
Path	/api/v2/external_storage/<id>

DELETE /api/v2/external_storage/<id>

Example Request

```
curl -s -k -X DELETE \
  -H 'Authorization: sgfeea6jsaz4mum9su8w61877n1g06sk' \
  'https://10.31.124.76/api/v2/external_storage/5620492334958379016'
```

CHAPTER

FORTYTHREE

API V2: NETWORK

Fudo Enterprise allows retrieving network settings within its API.

Note

Network settings are accessible for the users with `superadmin` privileges.

43.1 Data Structures

Table 1: `NetworkModel`

Attribute	Type	Description
`hostname`	string	System hostname
`dns`	address	DNS address(es)
`search`	string	Domain search path
`management`	address	Admin Panel's address
`access_gateway`	address	Access Gateway's address
`labels`	string	Global configuration parameters
`interfaces`	object-array	Network interfaces configuration containing: • `name`, • `ether`, • `active`, • `use_dhcp`, • `routing_table`, • `inet`
`routing`	object	Routing configuration containing: • `tables_max_count` (Max number of the routing tables is 8), • `tables {table[id]}` (ID of the routing table), • `routes {network, gateway}` (Network and gateway addresses)

CHAPTER

FORTYFOUR

GET NETWORK SETTINGS

Request

Method	`GET`
Path	`/api/v2/network`

GET /api/v2/network

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

CHAPTER

FORTYFIVE

API V2: UPGRADE NEW

45.1 Data Structures

Table 1: `UpgradeModel`

Attribute	Type	Required	Description
`version`	string		The version provided by the upgrade package. Read-only.
`size`	number		Upgrade package size, in bytes. Read-only.
`upgrade_check_`	string {`never`, `running`, `success`, `failure`}	yes	Status of the upgrade check. Read-only.
`estimated_upgr`	number		Estimated upgrade time in seconds. Available after successful upgrade check. Read-only.
`has_upgrade_sn`	boolean	yes	Indicates whether an upgrade snapshot is available. Read-only.
`upgrade_runnin`	boolean	yes	True if an upgrade is in progress. Read-only.

45.2 Retrieve Available Attributes of the *UpgradeModel*

Request

Method	`GET`
Path	`/api/v2/objspec/upgrade_info`

GET /api/v2/objspec/upgrade_info

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/objspec/upgrade_info'
```

45.3 Upload the Upgrade File

Request

Method	`POST`
Path	`/api/v2/upgrade/upload`
Headers	`Content-Type: multipart/form-data` (set automatically by curl when using -F)
Body	File uploaded using the `file` form field

POST /api/v2/upgrade/upload

Example Request

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -F 'file=@/path/to/fudo-5.6.0.upg' \
  'https://10.0.214.98/api/v2/upgrade/upload'
```

Response

```
```

45.4 Get Uploaded Upgrade Information

Request

Method	`GET`
Path	`/api/v2/upgrade`

GET /api/v2/upgrade

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/upgrade'
```

Response

```
{
    "upgrade": {
        "version": "5.6.3",
        "size": 857056256,
        "upgrade_check_status": "success",
        "estimated_upgrade_time": 300,
        "has_upgrade_snapshot": false,
        "upgrade_running": false
    },
```

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```
    "result": "success"
}
```

45.5 Run the Upgrade Check

Request

Method	`POST`
Path	`/api/v2/upgrade/check/run`

POST /api/v2/upgrade/check/run

Example Request

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/upgrade/check/run'
```

Response

```
{
    "result": "success"
}
```

45.6 Cancel the Upgrade Check

Request

Method	`POST`
Path	`/api/v2/upgrade/check/cancel`

POST /api/v2/upgrade/check/cancel

Example Request

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/upgrade/check/cancel'
```

Response

```
{
    "result": "success"
}
```

45.7 Get the Upgrade Check Log

Request

Method	GET
Path	/api/v2/upgrade/check/log

GET /api/v2/upgrade/check/log

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/upgrade/check/log'
```

Response

```
Starting upgrade check.
waiting for server to start....2025-05-13 18:45:37.590 CEST (pid=97795) (user=)␣
↪(app=) LOG:  redirecting log output to logging collector process
2025-05-13 18:45:37.590 CEST (pid=97795) (user=) (app=) HINT:  Future log␣
↪output will appear in directory "pg_log".
 done
server started
New upgrade script: UPG000754.
Upgrade UPG000754 started at 2025-05-13 09:45:42.
Upgrade UPG000754 completed successfully at 2025-05-13 09:45:43.
New upgrade script: UPG000756.
Upgrade UPG000756 started at 2025-05-13 09:45:43.
Upgrade UPG000756 completed successfully at 2025-05-13 09:45:43.
2025-05-13 18:45:37.590 CEST (pid=97795) (user=) (app=) LOG:  starting␣
↪PostgreSQL 16.2 on amd64-portbld-freebsd12.3, compiled by FreeBSD clang␣
↪version 10.0.1 (git@github.com:llvm/llvm-project.git llvmorg-10.0.1-0-
↪gef32c611aa2), 64-bit
2025-05-13 18:45:37.591 CEST (pid=97795) (user=) (app=) LOG:  listening on Unix␣
↪socket "/data/local/upgcheck/run/.s.PGSQL.5432"
2025-05-13 18:45:37.603 CEST (pid=97868) (user=) (app=) LOG:  database system␣
↪was interrupted; last known up at 2025-05-13 18:39:28 CEST
2025-05-13 18:45:37.652 CEST (pid=97868) (user=) (app=) LOG:  database system␣
↪was not properly shut down; automatic recovery in progress
2025-05-13 18:45:37.654 CEST (pid=97868) (user=) (app=) LOG:  redo starts at 0/
↪3B429E8
2025-05-13 18:45:37.663 CEST (pid=97868) (user=) (app=) LOG:  invalid record␣
↪length at 0/3BCE9B0: expected at least 24, got 0
2025-05-13 18:45:37.663 CEST (pid=97868) (user=) (app=) LOG:  redo done at 0/
↪3BCE978 system usage: CPU: user: 0.00 s, system: 0.00 s, elapsed: 0.00 s
2025-05-13 18:45:37.665 CEST (pid=97847) (user=) (app=) LOG:  checkpoint␣
↪starting: end-of-recovery immediate wait
2025-05-13 18:45:37.673 CEST (pid=97847) (user=) (app=) LOG:  checkpoint␣
↪complete: wrote 116 buffers (0.7%); 0 WAL file(s) added, 0 removed, 0␣
↪recycled; write=0.007 s, sync=0.001 s, total=0.008 s; sync files=72,␣
```

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```
↪longest=0.001 s, average=0.001 s; distance=559 kB, estimate=559 kB; lsn=0/
↪3BCE9B0, redo lsn=0/3BCE9B0
2025-05-13 18:45:37.688 CEST (pid=97795) (user=) (app=) LOG:  database system␣
↪is ready to accept connections
Upgrade check finished successfully. Duration 1 seconds.
```

45.8 Run the Upgrade

Request

Method	`POST`
Path	`/api/v2/upgrade/run`

POST /api/v2/upgrade/run

Example Request

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/upgrade/run'
```

Response

```
{
    "result": "success"
}
```

Note

After running the `upgrade/run` request, the operation may take some time to complete. Please wait patiently while the upgrade is being processed.

45.9 Delete Upgrade

Request

Method	`DELETE`
Path	`/api/v2/upgrade`

DELETE /api/v2/upgrade

Example Request

```
curl -s -k -X DELETE \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.31.87.227/api/v2/upgrade'
```

Response

```
{
    "result": "success"
}
```

45.10 Delete Upgrade Snapshot

Request

Method	DELETE
Path	/api/v2/upgrade/snapshot

DELETE /api/v2/upgrade/snapshot

Example Request

```
curl -s -k -X DELETE \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.31.87.227/api/v2/upgrade/snapshot'
```

Response

```
{
    "result": "success"
}
```

CHAPTER

FORTYSIX

API V2: HOTFIX NEW

46.1 Upload the Hotfix File

Request

Method	`POST`
Path	`/api/v2/hotfix/upload`
Headers	`Content-Type: application/octet-stream`
Body	Raw hotfix file content sent as binary data
Authentication	Authenticated web session (`sessionid` cookie) with CSRF protection

POST /api/v2/hotfix/upload

Example Request

```
curl -sk -X POST 'https://10.31.118.184/api/v2/hotfix/upload' \
  -H 'Content-Type: application/octet-stream' \
  -H 'Origin: https://10.31.118.184' \
  -H 'Referer: https://10.31.118.184/settings/system/hotfix' \
  -H 'X-CSRFToken: <csrf_token>' \
  -H 'Cookie: sessionid=<session_id>; csrftoken=<csrf_token>' \
  --data-binary '@/path/to/hotfix_file.fshf'
```

Response

```
{
    "result": "success"
}
```

Note

This endpoint requires an authenticated web session and CSRF protection. Token-based authorization using the `Authorization` header is not sufficient.

46.2 Get Uploaded Hotfix Information

Request

Method	`GET`
Path	`/api/v2/hotfix`

GET /api/v2/hotfix

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/hotfix'
```

Response

```
{
    "result": "success",
    "hotfix": [
        {
            "name": "hotfix_name_5.6.3",
            "description": "Hotfix for ...",
            "installed": null
        }
    ]
}
```

46.3 Install the Hotfix

Request

Method	`POST`
Path	`/api/v2/hotfix/install/<name>`
Headers	`Authorization: <token>`
Body	Not required

POST /api/v2/hotfix/install/<name>

Example Request

```
curl -s -k -X POST \
  -H 'Authorization: proxycrypto' \
  'https://10.31.118.184/api/v2/hotfix/install/hotfix_name_5.6.3'
```

Response

```
{
    "result": "success",
    "output": "Running preinstall script.\nStopping pmonitord.\nWaiting for␣
```

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```
↪PIDS: 49368.\nStopping fudod.\nWaiting for PIDS: 44506.\nRunning postinstall␣
↪script.\nStarting fudod.\nStarting pmonitord.\n"
}
```

Note

The `output` field contains the execution log of the hotfix installation process, including pre-installation and post-installation steps.

46.4 Delete Uploaded Hotfix File

Request

Method	`DELETE`
Path	`/api/v2/hotfix/<name>`

DELETE /api/v2/hotfix/<name>

Example Request

```
curl -s -k -X DELETE \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.31.87.227/api/v2/hotfix/hotfix_name_5.6.3'
```

Response

```
{
    "result": "success"
}
```

Note

The names of uploaded hotfixes can be retrieved using the `GET /api/v2/hotfix` endpoint.

CHAPTER

FORTYSEVEN

API V2: LICENSE NEW

47.1 Data Structures

Table 1: `LicenseModel`

Attribute	Type	Required	Description
`serial`	string		License serial number. Read-only.
`fuid`	string		License fuid identifier. Read-only.
`expiration_dat`	string	yes	Specifies the license validity period. Format: `YYYY-MM-DD` / `unlimited`. Read-only.
`expired`	boolean	yes	Indicates whether the license has expired. Read-only.
`owner`	string	yes	Specifies the name of the entity to which the license is issued. Read-only.
`type`	string	yes	Defines the license type: `test` for evaluation or `commercial` for official use. Read-only.
`nodes`	string		Limits the number of nodes that can be configured. Format: a positive integer or `unlimited`. Read-only.
`servers`	string		Limits the number of servers that can be configured. Format: a positive integer or `unlimited`. Read-only.
`activeusers`	string		The limit of active users. Format: a positive integer or `unlimited`. Read-only.
`changers`	string		The number of accounts that can have an assigned password changer. Format: a positive integer or `unlimited`. Read-only.
`sessions`	string		Limit how many concurrent sessions can be established. Format: a positive integer or `unlimited`. Read-only.
`procmaxocr`	string		Limit how many OCR tasks can be processed concurrently. Format: a positive integer or `unlimited`. Read-only.
`servers_inuse`	number	yes	Indicates how many servers are currently used. Read-only.
`activeusers_in`	number	yes	Number of active users currently in use. Read-only.
`changers_inuse`	number	yes	Number of accounts with password changers currently in use. Read-only.

47.2 Retrieve Available Attributes of the *LicenseModel*

Request

Method	`GET`
Path	`/api/v2/objspec/license`

GET /api/v2/objspec/license

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/objspec/license'
```

47.3 Data Structures

Table 2: `LicenseUploadModel`

Attribute	Type	Required	Description
`license`	string	yes	The full contents of the license file, provided as a plain-text string.

47.4 Retrieve Available Attributes of the *LicenseUploadModel*

Request

Method	`GET`
Path	`/api/v2/objspec/license_upload`

GET /api/v2/objspec/license_upload

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/objspec/license_upload'
```

47.5 Get License Information

Request

Method	`GET`
Path	`/api/v2/license`

GET /api/v2/license

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/license'
```

Response


```
{
    "license": {
        "serial": "33333333",
        "expiration_date": "2027-12-31",
        "expired": false,
        "owner": "FudoSecurity",
        "type": "commercial",
        "nodes": "8",
        "servers": "5000",
        "changers": "1000",
        "procmaxocr": "15",
        "servers_inuse": 1468,
        "activeusers_inuse": 768,
        "changers_inuse": 0
    },
    "result": "success"
}
```


47.6 Upload the License

Request

Method	`POST`
Path	`/api/v2/license`
Headers	`Content-Type: Application/json`
Body	`LicenseUploadModel`

POST /api/v2/license

Example Request

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/license' \
  -d '{
    "license": "serial=33333333
servers=5000
changers=400
expire=20271231
mode=host
procmaxocr=15
license type: commercial
```

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```
type=test
owner=FudoSecurity
nodes=8
languages=en,pl
key=NTXXXXXXXXXXXXXXXXXXXXXXXXXXXX...<truncated>
signature=dTJOftdo2i4ykvXUYTDnijSy...<truncated>"
}'
```

Response

```
{
    "result": "success"
}
```

CHAPTER

FORTYEIGHT

API V2: IPMI NEW

Note

This feature is available only if the device's IPMI port is use.

48.1 Data Structures

Table 1: `IPMIModel`

Attribute	Type	Required	Description
`host`	string	yes	Format: IPv4 address (e.g. `192.168.0.1`).
`mask`	number	yes	Value range: from `0` to `32`."
`gateway`	string	yes	Format: IPv4 address (e.g. `192.168.0.1`).

48.2 Retrieve Available Attributes of the *IPMIModel*

Request

Method	`GET`
Path	`/api/v2/objspec/ipmi`

GET /api/v2/objspec/ipmi

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/objspec/ipmi'
```

48.3 Get IPMI Configuration Setup

Request

Method	`GET`
Path	`/api/v2/network/ipmi`

GET /api/v2/network/ipmi

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/network/ipmi'
```

Response

```
{
    "ipmi": {
        "host": "192.168.1.100",
        "mask": 24,
        "gateway": "192.168.1.1"
    },
    "result": "success"
}
```

48.4 Get the Status of IPMI

Request

Method	GET
Path	/network/ipmi/enabled

GET /api/v2/network/ipmi/enabled

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/network/ipmi/enabled'
```

Response

```
{
    "ipmi_enabled": false,
    "result": "success"
}
```

48.5 Create IPMI Configuration

Request

Method	POST
Path	/api/v2/network/ipmi
Headers	Content-Type: Application/json
Body	IPMIModel

POST /api/v2/network/ipmi

Example Request

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
      -H 'Content-Type: application/json' \
  'https://10.0.214.98/api/v2/network/ipmi' \
      -d'{"host": "192.168.1.100","mask": 24,"gateway": "192.168.1.1"}'
```

Response

```
{
    "ipmi": {
        "host": "192.168.1.100",
        "mask": 24,
        "gateway": "192.168.1.1"
    },
    "result": "success"
}
```

CHAPTER

FORTYNINE

API V2: HEALTHCHECK

By using *healthcheck*, you can check the overall Fudo Enterprise health and verify its proper functioning. This method is accessible without authentication.

Note

- *Healthcheck* is disabled by default. Please go to *Settings* > *System*, and enable the *API health check* option on the *General* tab, under the *Maintenance and supervision section*.

49.1 Get Healthcheck Status

Request

Method	`GET`
Path	`/api/v2/healthcheck`

Example Request

GET /api/v2/healthcheck`

Response - positive

```
{
    "result": "success",
    "status": "ok"
}
```

Response - negative

```
{
    "result": "success",
    "status": "error"
}
```

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

CHAPTER

FIFTY

API V2: STATUS

The *Status* method allows retrieving detailed information about the Fudo Enterprise status including:

- Cluster status.
- The temperature of CPU cores in degrees Celsius.
- Database server status.
- Disks status.
- Fudo unique identifier.
- System load.
- Device memory utilization.
- Power supply units status.
- Device serial number.
- Number and list of currently active sessions.
- Status of last system shutdown or reboot.
- SMART attributes of disks.
- Device storage utilization.
- Status of last attempted firmware upgrade.
- System uptime.
- Firmware version.

Note

- The *Status* method requires authentication.
- It is accessible for every user role.

50.1 Get Status Information

Request

Method	`GET`
Path	`/api/v2/status`

Example Request

GET /api/v2/status`

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

CHAPTER

FIFTYONE

API V2: EXPORTING/IMPORTING SYSTEM CONFIGURATION NEW

Warning

The endpoints described in this section belong to the `/internal` API group and may change without prior notice. These interfaces are intended for internal use and are not guaranteed to be stable between releases.

For more details refer to the *API BETA Endpoints* section.

51.1 Data Structures

Table 1: `ConfigurationModel`

Attribute	Type	Required	Description
`master_key`	string	yes	Base64 encode master key file content.
`configuration`	string	yes	Configuration file content.

51.2 Retrieve Available Attributes of the *ConfigurationModel*

Request

Method	`GET`
Path	`/api/v2/objspec/configuration_import`

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

51.3 Exporting the Master Key

Note

Exporting the Master Key requires a certificate, which will be used to encrypt the exported key data.

Request

Method	GET
Path	/api/v2/internal/masterkey/export

GET /api/v2/internal/masterkey/export

```
curl -s -k -X GET \
        -H 'Authorization: sgfeea6jsaz4mum9su8w61877n1g06sk' \
        'https://10.0.214.98/api/v2/internal/masterkey/export' \
     -d '{
           "certificate": "-----BEGIN CERTIFICATE-----\nMIIC...snip...\n-----
↪END CERTIFICATE-----\n"
         }'
```

51.4 Exporting System Configuration

Request

Method	GET
Path	/api/v2/internal/configuration/export

GET /api/v2/internal/configuration/export

The following example downloads the configuration to a file named `fudo_config.conf`.

Example Request

```
curl -s -k -X GET \
-H 'Authorization: sgfeea6jsaz4mum9su8w61877n1g06sk' \
'https://10.0.214.98/api/v2/internal/configuration/export' \
-o fudo_config.conf
```

51.5 Importing System Configuration

Request

Method	POST
Path	/api/v2/internal/configuration/import
Headers	Content-Type: Application/json
Body	ConfigurationModel

POST /api/v2/internal/configuration/import

Example Request

```
curl -s -k -X POST \
-H 'Authorization:sgfeea6jsaz4mum9su8w61877n1g06sk' \
```

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```
'https://10.31.87.227/api/v2/internal/configuration/import' \
-H 'Content-Type: application/json' \
-d '{"master_key":"<base64 masterkey decrypted>","configuration": "<sql file␣
↪content>"}'
```

Response

```
{
    "result": "success"
}
```

CHAPTER

FIFTYTWO

API V2: USER DIRECTORY NEW

Fudo Enterprise features automatic users synchronization service which enables importing users information from Active Directory servers or other servers compatible with the LDAP protocol.

52.1 API v2: User Directory Configuration NEW

52.1.1 Data Structures

Table 1: `UserDirectoryModel`

Attribute	Type	Required	Description
`id`	string		Read-only, unique object identifier.
`name`	string	yes	Case-insensitive, unique name.
`type`	string {`AD`, `LDAP`}; default value `AD`	yes	Immutable.
`position`	number		Unique.
`username`	string	yes	Unique.
`password`	string	yes	Protected.
`dn`	string	yes	
`base_user`	string		
`base_group`	string		
`user_domain`	string		
`user_filter`	string; default value `(&(objectclass=user))`	yes	
`group_filter`	string; default value `(&(objectclass=group))`		
`server_lastupdate`	string		Timestamp.
`db_lastupdate`	string		Timestamp.
`login_field`	string; default value `sAMAccountName`	yes	
`mail_field`	string; default value `mail`		
`memberof_field`	string; default value `memberOf`	yes	
`telephone_field`	string; default value `telephoneNumber`		
`company_field`	string; default value `company`		

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Table 1 – continued from previous page

Attribute	Type	Required	Description
displayname_field	string; default value displayName	yes	
dn_field	string; default value distinguishedName	yes	
certificate_field	string; default value userCertificate	yes	
guid_field	string; default value objectGUID	yes	
auto_block	boolean; default value true	yes	
x509_certificate_metho	boolean; default value false	yes	
x509_sshkey_method	boolean; default value false	yes	
created_at	datetime		Read-only. Timestamp of creation.
modified_at	datetime		Read-only. Timestamp of modification.
removed	boolean		Read-only.

52.1.2 Retrieve Available Attributes of the *UserDirectoryModel*

Request

Method	GET
Path	/api/v2/objspec/user_directory

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

52.1.3 Get Existing User Directory Configurations

Request

Method	GET
Path	/api/v2/user_directory

GET /api/v2/user_directory

Example Request

```
curl -s -k -X GET \
-H 'Authorization: sgfeea6jsaz4mum9su8w61877n1g06sk' \
'https://10.0.214.98/api/v2/user_directory'
```

Response

```
{
    "result": "success",
    "user_directory": [
        {
            "id": "9115285645797883905",
            "name": "active-directory-10.0.100.100",
            "type": "AD",
            "position": 0,
            "username": "Administrator",
            "dn": "ad.com",
            "base_user": "dc=ad,dc=com",
            "base_group": "dc=ad,dc=com",
            "user_domain": "fudo-ad.com",
            "user_filter": "(&(objectclass=user))",
            "group_filter": "(&(objectclass=group))",
            "login_field": "sAMAccountName",
            "mail_field": "mail",
            "memberof_field": "memberOf",
            "telephone_field": "telephoneNumber",
            "company_field": "company",
            "displayname_field": "displayName",
            "dn_field": "distinguishedName",
            "certificate_field": "userCertificate",
            "guid_field": "objectGUID",
            "auto_block": true,
            "x509_certificate_method": false,
            "x509_sshkey_method": false,
            "created_at": "2025-05-05 04:51:54.021816-07",
            "modified_at": "2025-05-05 04:51:54.021816-07"
        }
    ]
}
```


52.1.4 Get Existing User Directory Configuration by ID

Request

Method	GET
Path	/api/v2/user_directory/<id>

GET /api/v2/user_directory/<id>

Example Request

```
curl -s -k -X GET \
-H 'Authorization: sgfeea6jsaz4mum9su8w61877n1g06sk' \
'https://10.0.214.98/api/v2/user_directory/801640733671948289'
```

Response

```
{
    "result": "success",
    "user_directory": {
        "id": "9115285645797883908",
        "name": "ldap-10.0.200.100 [domain: ldap.com]",
        "type": "LDAP",
        "position": 3,
        "username": "cn=admin,dc=ldap,dc=com",
        "dn": "cn=admin,dc=ldap,dc=com",
        "base_user": "dc=ldap,dc=com",
        "base_group": "dc=ldap,dc=com",
        "user_domain": "ldap.com",
        "user_filter": "(objectClass=inetOrgPerson)",
        "group_filter": "(objectClass=groupOfNames)",
        "login_field": "uid",
        "mail_field": "mail",
        "memberof_field": "memberOf",
        "telephone_field": "telephoneNumber",
        "company_field": "o",
        "displayname_field": "displayName",
        "dn_field": "dn",
        "certificate_field": "userCertificate",
        "guid_field": "dn",
        "auto_block": true,
        "x509_certificate_method": false,
        "x509_sshkey_method": false,
        "created_at": "2025-05-05 04:51:54.039467-07",
        "modified_at": "2025-05-05 05:00:18.099246-07"
    }
}
```


52.1.5 Defining User Directory Configuration

Request

Method	`POST`
Path	`/api/v2/user_directory`
Headers	`Content-Type: Application/json`
Body	`UserDirectoryModel`

POST /api/v2/user_directory

Example Request

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w61877n1g06sk' \
  -H 'Content-Type: application/json' \
  https://10.31.87.227/api/v2/user_directory \
  -d '{
    "name": "ldap-10.0.100.200 [domain: ldap.com]",
```

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```
    "type": "LDAP",
    "position": 3,
    "username": "cn=admin,dc=ldap,dc=com",
    "password": "password",
    "dn": "cn=admin,dc=ldap,dc=com",
    "base_user": "dc=ldap,dc=com",
    "base_group": "dc=ldap,dc=com",
    "user_domain": "ldap.com",
    "user_filter": "(objectClass=inetOrgPerson)",
    "group_filter": "(objectClass=groupOfNames)",
    "login_field": "uid",
    "mail_field": "mail",
    "memberof_field": "memberOf",
    "telephone_field": "telephoneNumber",
    "company_field": "o",
    "displayname_field": "displayName",
    "dn_field": "dn",
    "certificate_field": "userCertificate",
    "guid_field": "dn"
  }'
```

Response

```
{
    "result": "success",
    "user_directory": {
        "id": "9115285645797883909"
    }
}
```

52.1.6 Modify User Directory Configuration

Request

Method	`PATCH`
Path	`/api/v2/user_directory/<id>`
Headers	`Content-Type: Application/json`
Body	`UserDirectoryModel`

PATCH /api/v2/user_directory/<id>

Example Request

```
curl -s -k -X PATCH \
  -H 'Authorization: sgfeea6jsaz4mum9su8w61877n1g06sk' \
  -H 'Content-Type: application/json' \
  https://10.31.87.227/api/v2/user_directory/9115285645797883909 \
  -d '{
    "name":"ldap-other-name",
```

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```
    "position":5,
    "password":"different"
  }'
```

Response

```
{
    "result": "success"
}
```

52.1.7 Deleting User Directory Configuration

Request

Method	`DELETE`
Path	`/api/v2/user_directory/<id>`

DELETE /api/v2/user_directory/<id>

Example Request

```
curl -s -k -X DELETE \
-H 'Authorization:vg1ei6rgo58fsbobr7octp0w3afd9vsm' \
https://10.31.87.227/api/v2/user_directory/9115285645797883908
```

Response

```
{
    "result": "success"
}
```

52.2 API v2: User Directory Controllers NEW

52.2.1 Data Structures

Table 7: `UserDirectoryServerModel`

Attribute	Type	Required	Description
`id`	string		Read-only, unique object identifier.
`address`	string	yes	Case-insensitive. Uniqueness is required in the combination of attribute `address` with attributes `user_directory_id`, and `port`.
`port`	number {1 - 65535}	yes	Value format: port. Uniqueness is required in the combination of attribute `port` with attributes `address`, and `user_directory_id`.

continues on next page

Table 7 – continued from previous page

Attribute	Type	Required	Description
`user_directory_:`	string	yes	Uniqueness is required in the combination of attribute `user_directory_id` with attributes `address`, and `port`.
`user_directory_ı`	string		Read-only. Expensive to use.
`user_directory_1`	string		Read-only. Expensive to use.
`tls_enabled`	boolean	yes	
`tls_certificate`	string	if `tls_enabl` == `true`	Value format: x509-certificate.
`paged_mode`	boolean	yes	
`created_at`	datetime		Read-only. Timestamp of creation.
`modified_at`	datetime		Read-only. Timestamp of modification.
`removed`	boolean		Read-only.

52.2.2 Retrieve Available Attributes of the *UserDirectoryServerModel*

Request

Method	`GET`
Path	`/api/v2/objspec/user_directory_server`

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

52.2.3 Get Existing User Directory Controllers Configuration

Request

Method	`GET`
Path	`/api/v2/user_directory/server`

GET /api/v2/user_directory/server

Example Request

```
curl -s -k -X GET \
-H 'Authorization: sgfeea6jsaz4mum9su8w61877n1g06sk' \
'https://10.0.214.98/api/v2/user_directory/server'
```

Response

```
{
    "result": "success",
    "user_directory_server": [
        {
            "id": "9115285645797883905",
```

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```
            "address": "10.0.200.100",
            "port": 121,
            "user_directory_id": "9115285645797883905",
            "user_directory_name": "active-directory-10.0.200.100 [domain: ad.
↪com]",
            "user_directory_type": "AD",
            "tls_enabled": false,
            "paged_mode": true,
            "created_at": "2025-05-05 04:51:54.027646-07",
            "modified_at": "2025-05-05 04:51:54.027646-07"
        }
    ]
}
```

52.2.4 Get Controllers Configuration by User Directory ID

Request

Method	GET
Path	/api/v2/user_directory/<user_directory_id>/server

GET /api/v2/user_directory/<user_directory_id>/server

Example Request

```
curl -s -k -X GET \
-H 'Authorization:sgfeea6jsaz4mum9su8w61877n1g06sk' \
'https://10.31.87.227/api/v2/user_directory/9115285645797883908/server'
```

Response

```
{
    "result": "success",
    "user_directory_server": [
        {
            "id": "9115285645797883905",
            "address": "10.0.200.100",
            "port": 389,
            "user_directory_id": "9115285645797883905",
            "user_directory_name": "active-directory-10.0.200.100 [domain: ad.
↪com]",
            "user_directory_type": "AD",
            "tls_enabled": false,
            "paged_mode": true,
            "created_at": "2025-05-05 04:51:54.027646-07",
            "modified_at": "2025-05-05 04:51:54.027646-07"
        },
        {
            "id": "9115285645797883910",
```

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```
            "address": "10.0.232.20",
            "port": 389,
            "user_directory_id": "9115285645797883908",
            "user_directory_name": "ldap-10.0.200.100 [domain: ldap.com]",
            "user_directory_type": "LDAP",
            "tls_enabled": false,
            "paged_mode": true,
            "created_at": "2025-05-05 04:51:54.041014-07",
            "modified_at": "2025-05-05 04:51:54.041014-07"
        }
    ]
}
```


52.2.5 Get Controller Configuration by User Directory and Controller ID

Request

Method	`GET`
Path	`/api/v2/user_directory/<user_directory_id>/server/<id>`

GET /api/v2/user_directory/<user_directory_id>/server/<id>

Example Request

```
curl -s -k -X GET \
-H 'Authorization:sgfeea6jsaz4mum9su8w61877n1g06sk' \
'https://10.31.87.227/api/v2/user_directory/9115285645797883908/server/
↪9115285645797883910'
```

Response


```
{
    "result": "success",
    "user_directory_server": [
        {
            "id": "9115285645797883910",
            "address": "10.0.200.100",
            "port": 389,
            "user_directory_id": "9115285645797883908",
            "user_directory_name": "ldap-10.0.200.100 [domain: ldap.com]",
            "user_directory_type": "LDAP",
            "tls_enabled": false,
            "paged_mode": true,
            "created_at": "2025-05-05 04:51:54.041014-07",
            "modified_at": "2025-05-05 04:51:54.041014-07"
        }
    ]
}
```

52.2.6 Defining Controller Configuration for Specific User Directory

Request

Method	POST
Path	/api/v2/user_directory/<user_directory_id>/server
Headers	Content-Type: Application/json
Body	UserDirectoryServerModel

POST /api/v2/user_directory/<id>/server

Example Request

```
curl -s -k -X POST \
-H 'Authorization:sgfeea6jsaz4mum9su8w61877n1g06sk' \
https://10.31.87.227/api/v2/user_directory/9115285645797883909/server \
-H 'Content-Type: application/json' -d'{"address":"10.0.200.100","port":122,
↪"tls_enabled":false,"paged_mode":true}'
```

Response

```
{
    "result": "success",
    "user_directory_server": {
        "id": "9115285645797883911"
    }
}
```

52.2.7 Modify Controller Configuration for Specific User Directory

Request

Method	PATCH
Path	/api/v2/user_directory/<user_directory_id>/server/<id>
Headers	Content-Type: Application/json
Body	UserDirectoryServerModel

PATCH /api/v2/user_directory/<user_directory_id>/server/<id>

Example Request

```
curl -s -k -X PATCH \
  -H 'Authorization: sgfeea6jsaz4mum9su8w61877n1g06sk' \
  -H 'Content-Type: application/json' \
  https://10.31.87.227/api/v2/user_directory/9115285645797883909/server/
↪9115285645797883911 \
  -d '{
    "tls_enabled": true,
    "tls_certificate": "-----BEGIN CERTIFICATE-----\\nMIID...\\n...REDACTED␣
↪CERTIFICATE DATA...\\n-----END CERTIFICATE-----"
  }'
```

Response

```
{
    "result": "success"
}
```

52.2.8 Deleting Controller from User Directory Configuration

Request

Method	DELETE
Path	/api/v2/user_directory/<user_directory_id>/server/<id>

DELETE /api/v2//user_directory/<user_directory_id>/server/<id>

Example Request

```
curl -s -k -X DELETE \
-H 'Authorization:vg1ei6rgo58fsbobr7octp0w3afd9vsm' \
https://10.31.87.227/api/v2/user_directory/9115285645797883908/server/
↪9115285645797883910
```

Response

```
{
    "result": "success"
}
```

52.3 API v2: User Directory - Adding Group Mapping NEW

52.3.1 Data Structures

Table 14: UserDirectoryGroupModel

Attribute	Type	Required	Description
id	string		Read-only, unique object identifier.
group_path	string	yes	Uniqueness is required in the combination of attribute group_path with attributes group_guid, and user_directory_id.
group_guid	string	yes	Uniqueness is required in the combination of attribute group_guid with attributes group_path, and user_directory_id.
user_directory_:	string	yes	Uniqueness is required in the combination of attribute user_directory_id with attributes group_path, and group_guid.
user_directory_ı	string		Read-only. Expensive to use.

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Table 14 – continued from previous page

Attribute	Type	Required	Description
user_directory_1	string		Read-only. Expensive to use.
groups	object-array		Read-only. Expensive to use.
roles	object-array		Read-only. Expensive to use.
external_authen1	object-array		Read-only. Expensive to use.
created_at	datetime		Read-only. Timestamp of creation.
modified_at	datetime		Read-only. Timestamp of modification.
removed	boolean		Read-only.

52.3.2 Retrieve Available Attributes of the *UserDirectoryGroupModel*

Request

Method	GET
Path	/api/v2/objspec/user_directory_group

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

52.3.3 Get Existing User Directory Groups Configuration

Request

Method	GET
Path	/api/v2/user_directory_group

GET /api/v2/user_directory_group

Example Request

```
curl -s -k -X GET  \
-H 'Authorization: sgfeea6jsaz4mum9su8w61877n1g06sk'  \
'https://10.0.214.98/api/v2/user_directory_group'
```

Response

```
{
    "result": "success",
    "user_directory_group": [
        {
            "id": "5683542729741565953",
            "group_path": "CN=Users,CN=Builtin,DC=example,DC=com",
            "group_guid": "\\CC\\04\\58\\2C\\BB\\9B\\E5\\46\\A0\\B1\\D0\\E3\\02\
↪\71\\BC\\0E",
            "user_directory_id": "5683542729741565954",
            "user_directory_name": "active-directory-10.0.242.80 [domain:␣
↪example.com]",
```

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```
            "user_directory_type": "AD",
            "groups": [
                {
                    "id": "5683542729741565958",
                    "name": "Group_A",
                    "description": null
                }
            ],
            "roles": [
                {
                    "id": "5683542729741565964",
                    "name": "Server Admin",
                    "description": null
                }
            ],
            "created_at": "2025-06-02 04:02:29.893151-07",
            "modified_at": "2025-06-02 04:02:29.912421-07"
        }
    ]
}
```


52.3.4 Get Group Configuration by ID

Request

Method	GET
Path	/api/v2/user_directory_group/<id>

GET /api/v2/user_directory_group/<id>

Example Request

```
curl -s -k -X GET  \
-H 'Authorization:sgfeea6jsaz4mum9su8w61877n1g06sk'  \
'https://10.31.87.227/api/v2/user_directory_group/5683542729741565953'
```

Response


```
{
    "result": "success",
    "user_directory_group": [
        {
            "id": "5683542729741565953",
            "group_path": "CN=Users,CN=Builtin,DC=example,DC=com",
            "group_guid": "\\CC\\04\\58\\2C\\BB\\9B\\E5\\46\\A0\\B1\\D0\\E3\\02\
↪\71\\BC\\0E",
            "user_directory_id": "5683542729741565954",
            "user_directory_name": "active-directory-10.0.242.80 [domain:␣
↪example.com]",
```


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```
            "user_directory_type": "AD",
            "groups": [
                {
                    "id": "5683542729741565958",
                    "name": "Group_A",
                    "description": null
                }
            ],
            "roles": [
                {
                    "id": "5683542729741565964",
                    "name": "Server Admin",
                    "description": null
                }
            ],
            "created_at": "2025-06-02 04:02:29.893151-07",
            "modified_at": "2025-06-02 04:02:29.912421-07"
        }
    ]
}
```


52.3.5 Define Group Configuration for Specific User Directory

Request

Method	`POST`
Path	`/api/v2/user_directory_group`
Headers	`Content-Type: Application/json`
Body	`UserDirectoryGroupModel`

POST /api/v2/user_directory_group

Example Request

```
curl -s -k -X POST  \
-H 'Authorization:sgfeea6jsaz4mum9su8w61877n1g06sk'  \
-H 'Content-Type: application/json'  \
https://10.31.96.188/api/v2/user_directory_group \
-d'{"group_path":"CN=Guests,CN=Builtin,DC=example,DC=com","group_guid":
↪"2c5804cc-9bbb-46e5-a0b1-d0e30271bc0e","user_directory_id":
↪"5683542729741565954"}'
```

Response


```
{
    "result": "success",
    "user_directory_group": {
        "id": "5683542729741565956"
    }
}
```

52.3.6 Modify Group Configuration for Specific User Directory

Request

Method	PATCH
Path	/api/v2/user_directory_group/<id>
Headers	Content-Type: Application/json
Body	UserDirectoryGroupModel

PATCH /api/v2/user_directory_group/<id>

Example Request

```
curl -s -k -X PATCH  \
-H 'Authorization:sgfeea6jsaz4mum9su8w61877n1g06sk'  \
-H 'Content-Type: application/json'  \
https://10.31.96.188/api/v2/user_directory_group/5683542729741565954 \
-d'{"group_path":"CN=Admins,CN=Builtin,DC=example,DC=com"}'
```

Response

```
{
    "result": "success"
}
```

52.3.7 Deleting Group from User Directory Configuration

Request

Method	DELETE
Path	/api/v2/user_directory_group/<id>

DELETE /api/v2/user_directory_group/<id>

Example Request

```
curl -s -k -X DELETE  \
-H 'Authorization:vg1ei6rgo58fsbobr7octp0w3afd9vsm'  \
https://10.31.87.227/api/v2/user_directory_group/5683542729741565954
```

Response

```
{
    "result": "success"
}
```

52.4 API v2: User Directory - Group Mapping - Adding to Groups NEW

52.4.1 Data Structures

Table 20: `UserDirectoryGroupGroupModel`

Attribute	Type	Required	Description
`id`	string		Read-only, protected, unique object identifier.
`user_directory_g`	string	yes	Uniqueness is required in the combination of attribute `user_directory_group_id` with attribute `group_id`.
`group_id`	string	yes	Uniqueness is required in the combination of attribute `group_id` with attribute `user_directory_group_id`.
`user_directory_:`	string		Read-only. Expensive to use.
`user_directory_r`	string		Read-only. Expensive to use.
`user_directory_t`	string		Read-only. Expensive to use.
`group_name`	string		Read-only. Expensive to use.
`user_directory_g`	string		Read-only. Expensive to use.
`user_directory_g`	string		Read-only. Expensive to use.
`created_at`	datetime		Read-only. Timestamp of creation.
`modified_at`	datetime		Read-only. Timestamp of modification.
`removed`	boolean		Read-only.

52.4.2 Retrieve Available Attributes of the *UserDirectoryGroupGroupModel*

Request

Method	`GET`
Path	`/api/v2/objspec/user_directory_group_group`

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

52.4.3 Get Groups Assigned via Group Mapping

Request

Method	`GET`
Path	`/api/v2/user_directory_group/group`

GET /api/v2/user_directory_group/group

Example Request

```
curl -s -k -X GET  \
  -H 'Authorization: sgfeea6jsaz4mum9su8w61877n1g06sk'  \
  'https://10.0.214.98/api/v2/user_directory_group/group'
```

Response


```
{
    "result": "success",
    "user_directory_group_group": [
        {
            "user_directory_group_id": "5683542729741565954",
            "group_id": "5683542729741565958",
            "user_directory_id": "5683542729741565954",
            "user_directory_name": "active-directory-10.0.242.80 [domain:␣
↪example.com]",
            "user_directory_type": "AD",
            "group_name": "Group_A",
            "user_directory_group_path": "CN=Guests,CN=Builtin,DC=example,DC=com
↪",
            "user_directory_group_guid": "\\CC\\04\\58\\2C\\BB\\9B\\E5\\46\\A0\\
↪B1\\D0\\E3\\02\\71\\BC\\0E",
            "created_at": "2025-06-05 03:14:24.316935-07",
            "modified_at": "2025-06-05 03:14:24.316935-07"
        },
        {
            "user_directory_group_id": "5683542729741565953",
            "group_id": "5683542729741565958",
            "user_directory_id": "5683542729741565954",
            "user_directory_name": "active-directory-10.0.242.80 [domain:␣
↪example.com]",
            "user_directory_type": "AD",
            "group_name": "Group_A",
            "user_directory_group_path": "CN=Users,CN=Builtin,DC=example,DC=com
↪",
            "user_directory_group_guid": "\\CC\\04\\58\\2C\\BB\\9B\\E5\\46\\A0\\
↪B1\\D0\\E3\\02\\71\\BC\\0E",
            "created_at": "2025-06-02 04:02:29.903779-07",
            "modified_at": "2025-06-02 04:02:29.903779-07"
        }
    ]
}
```


52.4.4 Get Groups Assigned via a Specific Group Mapping

Request

Method	GET
Path	/api/v2/user_directory_group/<user_directory_group_id>/group

GET /api/v2/user_directory_group/<user_directory_group_id>/group

Example Request

```
curl -s -k -X GET  \
  -H 'Authorization: sgfeea6jsaz4mum9su8w61877n1g06sk'  \
  'https://10.0.214.98/api/v2/user_directory_group/5683542729741565954/group'
```

Response

```
{
    "result": "success",
    "user_directory_group_group": [
        {
            "user_directory_group_id": "5683542729741565954",
            "group_id": "5683542729741565958",
            "user_directory_id": "5683542729741565954",
            "user_directory_name": "active-directory-10.0.242.80 [domain:␣
↪example.com]",
            "user_directory_type": "AD",
            "group_name": "Group_A",
            "user_directory_group_path": "CN=Guests,CN=Builtin,DC=example,DC=com
↪",
            "user_directory_group_guid": "\\CC\\04\\58\\2C\\BB\\9B\\E5\\46\\A0\\
↪B1\\D0\\E3\\02\\71\\BC\\0E",
            "created_at": "2025-06-05 03:14:24.316935-07",
            "modified_at": "2025-06-05 03:14:24.316935-07"
        }
    ]
}
```

52.4.5 Get Assigned Group by Group Mapping ID and Group ID

Request

Method	GET
Path	/api/v2/user_directory_group/<user_directory_group_id>/group/<group_id>

GET /api/v2/user_directory_group/<user_directory_group_id>/group/<group_id>

Example Request

```
curl -s -k -X GET  \
  -H 'Authorization: sgfeea6jsaz4mum9su8w61877n1g06sk'  \
  'https://10.0.214.98/api/v2/user_directory_group/5683542729741565954/group/
↪5683542729741565958'
```

Response

```
{
    "result": "success",
    "user_directory_group_group": [
```

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```
        {
            "user_directory_group_id": "5683542729741565954",
            "group_id": "5683542729741565958",
            "user_directory_id": "5683542729741565954",
            "user_directory_name": "active-directory-10.0.242.80 [domain:␣
↪example.com]",
            "user_directory_type": "AD",
            "group_name": "Group_A",
            "user_directory_group_path": "CN=Guests,CN=Builtin,DC=example,DC=com
↪",
            "user_directory_group_guid": "\\CC\\04\\58\\2C\\BB\\9B\\E5\\46\\A0\\
↪B1\\D0\\E3\\02\\71\\BC\\0E",
            "created_at": "2025-06-05 03:14:24.316935-07",
            "modified_at": "2025-06-05 03:14:24.316935-07"
        }
    ]
}
```


52.4.6 Define Group Assigned via Group Mapping

Request

Method	`POST`
Path	`/api/v2/user_directory_group/<user_directory_group_id>/group`
Headers	`Content-Type: Application/json`
Body	`UserDirectoryGroupGroupModel`

POST /api/v2/user_directory_group/<user_directory_group_id>/group

Example Request

```
curl -s -k -X POST  \
  -H 'Authorization:proxycrypto'  \
  -H 'Content-Type: application/json'  \
  https://10.31.96.188/api/v2/user_directory_group/5683542729741565954/group \
  -d'{"group_id":"5683542729741565959"}'
```

Response


```
{
    "result": "success"
}
```


52.4.7 Delete Group Assigned via Group Mapping

Request

Method	`DELETE`

continues on next page

Table 25 – continued from previous page

Path	/api/v2/user_directory_group/<user_directory_group_id>/group/<group_id>

DELETE /api/v2/user_directory_group/<user_directory_group_id>/group/<group_id>

Example Request

```
curl -s -k -X DELETE \
  -H 'Authorization:vg1ei6rgo58fsbobr7octp0w3afd9vsm' \
  https://10.31.87.227/api/v2/user_directory_group/5683542729741565954/group/
↪5683542729741565959
```

Response

```
{
    "result": "success"
}
```

52.5 API v2: User Directory - Group Mapping - Adding to Roles NEW

52.5.1 Data Structures

Table 26: `UserDirectoryGroupRoleModel`

Attribute	Type	Required	Description
`id`	string		Read-only, protected, unique object identifier.
`user_directory_g`	string	yes	Immutable. Uniqueness is required in the combination of attribute `user_directory_group_id` with attribute `role_id`.
`role_id`	string	yes	Uniqueness is required in the combination of attribute `role_id` with attribute `user_directory_group_id`.
`user_directory_:`	string		Read-only. Expensive to use.
`user_directory_r`	string		Read-only. Expensive to use.
`user_directory_t`	string		Read-only. Expensive to use.
`group_name`	string		Read-only. Expensive to use.
`user_directory_g`	string		Read-only. Expensive to use.
`user_directory_g`	string		Read-only. Expensive to use.
`created_at`	datetime		Read-only. Timestamp of creation.
`modified_at`	datetime		Read-only. Timestamp of modification.
`removed`	boolean		Read-only.

52.5.2 Retrieve Available Attributes of the *UserDirectoryGroupRoleModel*

Request

Method	GET
Path	/api/v2/objspec/user_directory_group_role

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

52.5.3 Get Roles Assigned via Group Mapping

Request

Method	GET
Path	/api/v2/user_directory_group/role

GET /api/v2/user_directory_group/role

Example Request

```
curl -s -k -X GET  \
-H 'Authorization: sgfeea6jsaz4mum9su8w61877n1g06sk'  \
'https://10.0.214.98/api/v2/user_directory_group/role'
```

Response


```
{
    "result": "success",
    "user_directory_group_role": [
        {
            "user_directory_group_id": "5683542729741565953",
            "role_id": "5683542729741565964",
            "user_directory_id": "5683542729741565954",
            "user_directory_name": "active-directory-10.0.242.80 [domain:␣
↪example.com]",
            "user_directory_type": "AD",
            "role_name": "Server Admin",
            "user_directory_group_path": "CN=Users,CN=Builtin,DC=example,DC=com
↪",
            "user_directory_group_guid": "\\CC\\04\\58\\2C\\BB\\9B\\E5\\46\\A0\\
↪B1\\D0\\E3\\02\\71\\BC\\0E",
            "created_at": "2025-06-02 04:02:29.911793-07",
            "modified_at": "2025-06-02 04:02:29.911793-07"
        }
    ]
}
```

52.5.4 Get Roles Assigned via a Specific Group Mapping

Request

Method	GET
Path	/api/v2/user_directory_group/<user_directory_group_id>/role

GET /api/v2/user_directory_group/<user_directory_group_id>/role

Example Request

```
curl -s -k -X GET  \
-H 'Authorization: sgfeea6jsaz4mum9su8w61877n1g06sk'  \
'https://10.0.214.98/api/v2/user_directory_group/5683542729741565953/role'
```

Response

```
{
    "result": "success",
    "user_directory_group_role": [
        {
            "user_directory_group_id": "5683542729741565953",
            "role_id": "5683542729741565964",
            "user_directory_id": "5683542729741565954",
            "user_directory_name": "active-directory-10.0.242.80 [domain:␣
↪example.com]",
            "user_directory_type": "AD",
            "role_name": "Server Admin",
            "user_directory_group_path": "CN=Users,CN=Builtin,DC=example,DC=com
↪",
            "user_directory_group_guid": "\\CC\\04\\58\\2C\\BB\\9B\\E5\\46\\A0\\
↪B1\\D0\\E3\\02\\71\\BC\\0E",
            "created_at": "2025-06-02 04:02:29.911793-07",
            "modified_at": "2025-06-02 04:02:29.911793-07"
        }
    ]
}
```

52.5.5 Get Assigned Role by Group Mapping ID and Role ID

Request

Method	GET
Path	/api/v2/user_directory_group/<user_directory_group_id>/role/<role_id>

GET /api/v2/user_directory_group/<user_directory_group_id>/role/<role_id>

Example Request

```
curl -s -k -X GET  \
-H 'Authorization: sgfeea6jsaz4mum9su8w61877n1g06sk'  \
'https://10.0.214.98/api/v2/user_directory_group/5683542729741565953/role/
↪5683542729741565964'
```

Response


```
{
    "result": "success",
    "user_directory_group_role": [
        {
            "user_directory_group_id": "5683542729741565953",
            "role_id": "5683542729741565964",
            "user_directory_id": "5683542729741565954",
            "user_directory_name": "active-directory-10.0.242.80 [domain:␣
↪example.com]",
            "user_directory_type": "AD",
            "role_name": "Server Admin",
            "user_directory_group_path": "CN=Users,CN=Builtin,DC=example,DC=com
↪",
            "user_directory_group_guid": "\\CC\\04\\58\\2C\\BB\\9B\\E5\\46\\A0\\
↪B1\\D0\\E3\\02\\71\\BC\\0E",
            "created_at": "2025-06-02 04:02:29.911793-07",
            "modified_at": "2025-06-02 04:02:29.911793-07"
        }
    ]
}
```


52.5.6 Define Role Assigned via Group Mapping

Request

Method	POST
Path	/api/v2/user_directory_group/<user_directory_group_id>/role
Headers	Content-Type: Application/json
Body	UserDirectoryGroupRoleModel

POST /api/v2/user_directory_group/<user_directory_group_id>/role

Example Request

```
curl -s -k -X POST  \
-H 'Authorization:sgfeea6jsaz4mum9su8w61877n1g06sk'  \
-H 'Content-Type: application/json'  \
https://10.31.96.188/api/v2/user_directory_group/5683542729741565954/role \
-d'{"role_id":"5683542729741565966"}'
```

Response

```
{
    "result": "success"
}
```

52.5.7 Delete Role Assigned via Group Mapping

Request

Method	DELETE
Path	/api/v2/user_directory_group/<user_directory_group_id>/role/<role_id>

DELETE /api/v2/user_directory_group/<user_directory_group_id>/role/<role_id>

Example Request

```
curl -s -k -X DELETE \
-H 'Authorization:proxycrypto' \
https://10.31.96.188/api/v2/user_directory_group/5683542729741565954/role/
↪5683542729741565966
```

Response

```
{
    "result": "success"
}
```

52.6 API v2: User Directory - Group Mapping - Assigning External Authentication NEW

52.6.1 Data Structures

Table 32: UserDirectoryGroupAuthenticationModel

Attribute	Type	Required	Description
id	string		Read-only, protected, unique object identifier.
user_directory_g	string	yes	Immutable. Uniqueness is required in the combination of attribute user_directory_group_id with attribute external_authentication_id.
external_authen	string	yes	Uniqueness is required in the combination of attribute external_authentication_id with attribute user_directory_group_id.

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Table 32 – continued from previous page

Attribute	Type	Required	Description
position	number		Uniqueness is required in the combination of attribute position with attribute user_directory_group_id.
user_directory_:	string		Read-only. Expensive to use.
user_directory_ı	string		Read-only. Expensive to use.
user_directory_1	string		Read-only. Expensive to use.
external_authen1	string		Read-only. Expensive to use.
external_authen1	string		Read-only. Expensive to use.
external_authen1	string		Read-only. Expensive to use.
external_authen1	number		Read-only. Expensive to use.
user_directory_ɡ	string		Read-only. Expensive to use.
user_directory_ɡ	string		Read-only. Expensive to use.
created_at	datetime		Read-only. Timestamp of creation.
modified_at	datetime		Read-only. Timestamp of modification.
removed	boolean		Read-only.

52.6.2 Retrieve Available Attributes of the *UserDirectoryGroupAuthenticationModel*

Request

Method	GET
Path	/api/v2/objspec/user_directory_group_authentication

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

52.6.3 Get External Authentication Assigned via Group Mapping

Request

Method	GET
Path	/api/v2/user_directory_group/external_authentication

GET /api/v2/user_directory_group/external_authentication

Example Request

```
curl -s -k -X GET  \
-H 'Authorization: sgfeea6jsaz4mum9su8w61877n1g06sk'  \
'https://10.0.214.98/api/v2/user_directory_group/external_authentication'
```

Response

```
{
    "result": "success",
```

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```
    "user_directory_group_authentication": [
        {
            "user_directory_group_id": "5683542729741565954",
            "external_authentication_id": "5683542729741565953",
            "position": 0,
            "user_directory_id": "5683542729741565954",
            "user_directory_name": "active-directory-10.0.242.80 [domain:␣
↪example.com]",
            "user_directory_type": "AD",
            "external_authentication_name": "AD",
            "external_authentication_type": "ad",
            "user_directory_group_path": "CN=Guests,CN=Builtin,DC=example,DC=com
↪",
            "user_directory_group_guid": "5683542729741565958",
            "created_at": "2025-06-05 08:50:54.599141-07",
            "modified_at": "2025-06-05 08:50:54.615507-07"
        },
        {
            "user_directory_group_id": "5683542729741565953",
            "external_authentication_id": "5683542729741565954",
            "position": 0,
            "user_directory_id": "5683542729741565954",
            "user_directory_name": "active-directory-10.0.242.80 [domain:␣
↪example.com]",
            "user_directory_type": "AD",
            "external_authentication_name": "LDAP",
            "external_authentication_type": "ldap",
            "external_authentication_address": "10.0.136.1",
            "external_authentication_port": 389,
            "user_directory_group_path": "CN=Users,CN=Builtin,DC=example,DC=com
↪",
            "user_directory_group_guid": "\\CC\\04\\58\\2C\\BB\\9B\\E5\\46\\A0\\
↪B1\\D0\\E3\\02\\71\\BC\\0E",
            "created_at": "2025-06-05 08:29:19.462607-07",
            "modified_at": "2025-06-05 08:51:05.932288-07"
        }
    ]
}
```


52.6.4 Get External Authentication Assigned via a Specific Group Mapping

Request

Method	`GET`
Path	`/api/v2/user_directory_group/<user_directory_group_id>/external_authentication`

GET /api/v2/user_directory_group/<user_directory_group_id>/ external_authentication

Example Request

```
curl -s -k -X GET  \
-H 'Authorization: sgfeea6jsaz4mum9su8w61877n1g06sk'  \
'https://10.0.214.98/api/v2/user_directory_group/5683542729741565953/external_
↪authentication'
```

Response

```
{
    "result": "success",
    "user_directory_group_authentication": [
        {
            "user_directory_group_id": "5683542729741565953",
            "external_authentication_id": "5683542729741565954",
            "position": 0,
            "user_directory_id": "5683542729741565954",
            "user_directory_name": "active-directory-10.0.242.80 [domain:␣
↪example.com]",
            "user_directory_type": "AD",
            "external_authentication_name": "LDAP",
            "external_authentication_type": "ldap",
            "external_authentication_address": "10.0.136.1",
            "external_authentication_port": 389,
            "user_directory_group_path": "CN=Users,CN=Builtin,DC=example,DC=com
↪",
            "user_directory_group_guid": "\\CC\\04\\58\\2C\\BB\\9B\\E5\\46\\A0\\
↪B1\\D0\\E3\\02\\71\\BC\\0E",
            "created_at": "2025-06-05 08:29:19.462607-07",
            "modified_at": "2025-06-05 08:51:05.932288-07"
        }
    ]
}
```

52.6.5 Get Assigned External Authentication by Group Mapping ID and External Authentication ID

Request

Method	GET
Path	/api/v2/user_directory_group/<user_directory_group_id>/external_authentication/<external_authentication_id>

GET /api/v2/user_directory_group/<user_directory_group_id>/external_authentication/<external_authentication_id>

Example Request

```
curl -s -k -X GET  \
-H 'Authorization: sgfeea6jsaz4mum9su8w61877n1g06sk'  \
```

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```
'https://10.0.214.98/api/v2/user_directory_group/5683542729741565953/external_
↪authentication/5683542729741565954'
```

Response


```
{
    "result": "success",
    "user_directory_group_authentication": [
        {
            "user_directory_group_id": "5683542729741565953",
            "external_authentication_id": "5683542729741565954",
            "position": 0,
            "user_directory_id": "5683542729741565954",
            "user_directory_name": "active-directory-10.0.242.80 [domain:␣
↪example.com]",
            "user_directory_type": "AD",
            "external_authentication_name": "LDAP",
            "external_authentication_type": "ldap",
            "external_authentication_address": "10.0.136.1",
            "external_authentication_port": 389,
            "user_directory_group_path": "CN=Users,CN=Builtin,DC=example,DC=com
↪",
            "user_directory_group_guid": "\\CC\\04\\58\\2C\\BB\\9B\\E5\\46\\A0\\
↪B1\\D0\\E3\\02\\71\\BC\\0E",
            "created_at": "2025-06-05 08:29:19.462607-07",
            "modified_at": "2025-06-05 08:51:05.932288-07"
        }
    ]
}
```


52.6.6 Define External Authentication Assigned via Group Mapping

Request

Method	`POST`
Path	`/api/v2/user_directory_group/<user_directory_group_id>/external_authentication`
Headers	`Content-Type: Application/json`
Body	`UserDirectoryGroupAuthenticationModel`

POST /api/v2/user_directory_group/<user_directory_group_id>/ external_authentication

Example Request

```
curl -s -k -X POST  \
-H 'Authorization:sgfeea6jsaz4mum9su8w61877n1g06sk'  \
-H 'Content-Type: application/json'  \
https://10.31.96.188/api/v2/user_directory_group/5683542729741565954/external_
↪authentication \
-d'{"external_authentication_id":"5683542729741565953"}'
```

Response

```
{
    "result": "success"
}
```

52.6.7 Delete External Authentication Assigned via Group Mapping

Request

Method	`DELETE`
Path	`/api/v2/user_directory_group/<user_directory_group_id>/external_authentication/<external_authentication_id>`

DELETE /api/v2/user_directory_group/<user_directory_group_id>/ external_authentication/<external_authentication_id>

Example Request

```
curl -s -k -X DELETE \
-H 'Authorization:sgfeea6jsaz4mum9su8w61877n1g06sk' \
https://10.31.96.188/api/v2/user_directory_group/5683542729741565954/external_
↪authentication/5683542729741565953
```

Response

```
{
    "result": "success"
}
```

52.7 API v2: User Directory Synchronization Status NEW

52.7.1 Data Structures

Table 38: `UserDirectoryEnableModel`

Attribute	Type	Required	Description
`enabled`	boolean; default value `AD`	yes	Enable User Directory synchronization.
`node`	string	yes	Synchronization is performed on node with given serial number.
`current_node`	boolean		Read-only. Synchronization is performed on current node.

52.7.2 Retrieve Available Attributes of the *UserDirectoryEnableModel*

Request

Method	GET
Path	/api/v2/objspec/user_directory_enable

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

52.7.3 Get User Directory Synchronization Status

Request

Method	GET
Path	/api/v2/user_directory/enable

GET /api/v2/user_directory/enable

Example Request

```
curl -s -k -X GET \
-H 'Authorization:vg1ei6rgo58fsbobr7octp0w3afd9vsm' \
https://10.31.87.227/api/v2/user_directory/enable'
```

Response

```
{
    "enabled": true,
    "node": "86496998",
    "current_node": true,
    "result": "success"
}
```

52.7.4 Enable/Disable User Directory Synchronization

Request

Method	PATCH
Path	/api/v2/user_directory/enable
Headers	Content-Type: Application/json
Body	UserDirectoryEnableModel

PATCH /api/v2/user_directory/enable

Example Request

```
curl -s -k -X PATCH \
-H 'Authorization:vg1ei6rgo58fsbobr7octp0w3afd9vsm' \
https://10.31.87.227/api/v2/user_directory/enable -H 'Content-Type: application/
↪json' -d'{"enabled":true}'
```

Response

```
{
    "result": "success"
}
```

52.7.5 Force Full Synchronization

Request

Method	PATCH
Path	/api/v2/user_directory/<user_directory_id>/force_full_sync

PATCH /api/v2/user_directory/<user_directory_id>/force_full_sync

Example Request

```
curl -s -k -X POST \
-H 'Authorization:vg1ei6rgo58fsbobr7octp0w3afd9vsm' \
https://10.31.87.227/api/v2/user_directory/9115285645797883908/force_full_sync
```

Response

```
{
    "result": "success"
}
```

CHAPTER

FIFTYTHREE

API V2: LOGS

System log is an internal registry of users activities which influence system state (login information, administrative actions, etc.).

53.1 Data Structures

Table 1: `LogModel`

Attribute	Type	Required	Description
`id`	string		Unique and read-only object Identifier
`facility_name`	string	yes	Unique, read-only, and case-insensitive facility name.
`severity_id`	string {2 = Critical, 3 = Error, 4 = Warning, 6 = Info, 7 = Debug}	yes	Read-only
`type_name`	string	yes	Read-only
`debuglevel`	string	yes	Read-only
`message`	string	yes	Read-only
`account_id`	string		Read-only. Requires `read` right on object type `account` for operation GET.
`account_name`	string		Read-only
`account_removed`	boolean		Read-only. Account removed status.
`account_secret_id`	string		Read-only
`account_secret_removed`	boolean		Read-only. Account secret removed status.
`listener_id`	string		Read-only
`listener_name`	string		Read-only
`listener_removed`	boolean		Read-only. Listener removed status.
`pool_id`	string		Read-only. Requires `read` right on object type `pool` for operation GET.
`pool_name`	string		Read-only
`pool_removed`	boolean		Read-only. Pool removed status.

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Table 1 – continued from previous page

Attribute	Type	Required	Description
safe_id	string		Read-only. Requires read right on object type safe for operation GET.
safe_name	string		Read-only
safe_removed	boolean		Read-only. Safe removed status.
session_id	string		Read-only
server_id	string		Read-only. Requires read right on object type server for operation GET.
server_name	string		Read-only
server_removed	boolean		Read-only. Server removed status.
subject_id	string		Read-only. ID of the object that is the subject of this log, e.g. superadmin giving operator access to user. Requires read right on object type user for operation GET.
subject_name	string		Read-only
subject_removed	boolean		Read-only. Subject removed status.
user_id	string		Read-only. Requires read right on object type user for operation GET.
user_name	string		Read-only
user_removed	boolean		Read-only. User removed status.
user_extra_id	string		Read-only. E.g., ID of the user whose specifications another user was granted access to. Requires read right on object type user for operation GET.
user_extra_name	string		Read-only
user_extra_removed	boolean		Read-only. User extra removed status.
node_serial	string		Read-only
node_name	string		Read-only
created_at	datetime		Read-only. Timestamp of creation.
modified_at	datetime		Read-only. Timestamp of modification.
removed	boolean		Read-only

53.2 Retrieve Available Attributes of the *LogModel*

Request

Method	`GET`
Path	`/api/v2/objspec/log`

To check allowed methods, available URL parameters and possible responses please refer to the *API Overview* section.

53.3 Get Log List

Example Request

GET /api/v2/log`

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/log'
```

CHAPTER

FIFTYFOUR

API V2: UAG - CURRENT USER IDENTITY NEW

54.1 Data Structures

Table 1: `UserIdentityModel`

Attribute	Type	Required	Description
`username`	string		Username of the currently authenticated user.
`domain`	string		Domain name if applicable (nullable).
`language`	string		Language preference set by the user.

54.2 Get Current User Identity

Request

Method	`GET`
Path	`/api/v2/me`

GET /api/v2/me

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/me'
```

Response

```
{
    "result": "success",
    "username": "admin",
    "domain": null,
    "language": "pl"
}
```

CHAPTER

FIFTYFIVE

API V2: UAG - ACCOUNTS LIST NEW

55.1 Get Account List

Request

Method	GET
Path	/api/v2/account

GET /api/v2/account

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  https://10.0.0.1/api/v2/account
```

Response

```
{
    "items": [
        {
            "id": "8169529724050079749",
            "name": "remoteapp-account",
            "type": "regular",
            "require_login": false,
            "blocked": false,
            "blocked_reason": null,
            "login_reason": false,
            "password_visible": false,
            "has_password_history": true,
            "has_remote_apps": true,
            "server": {
                "id": "8169529724050079749",
                "name": "remoteapp",
                "description": null,
                "address": "10.0.234.30",
                "port": 3389,
                "port_first": 3389,
                "port_last": 3389,
```

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```
                "mask": 32,
                "dynamic": false
            },
            "pool": null,
            "listeners_info": {
                "external": false,
                "local": true,
                "otp_enabled": true,
                "play_enabled": false,
                "multiple_addresses": true,
                "webclient": {
                    "safe_id": "8169529724050079745",
                    "secproto": "tls"
                }
            },
            "session_id": null,
            "protocol": "rdp",
            "note_access_level": "none",
            "session_status": null,
            "session_reason": null,
            "timeout": null,
            "access_request": {
                "enabled": false,
                "connection_available": false
            },
            "otp_in_access_gateway": true,
            "rdp_remote_apps_only": false,
            "rdp_resolution": null
        },
    ],
    "result": "success"
}
```


Note

- The `"password_visible": true` indicates that the **Reveal Password** option is enabled for the user and safe.
- The account ID is obtained: `"id": "8169529724050079749"`. This ID will be used for the checkout and checkin requests.
- When the checkout session is active then its ID is shown in the `session_id`. When checkout session for account and user is not active then `sessison_id` field is `null`.
- The `note_access_level` attribute indicates the user's access to account-related notes. This value is defined by the `note_access` setting on the associated Safe. For full details, refer to the section *API v2: Safes*.

CHAPTER

FIFTYSIX

API V2: UAG - ACCOUNT SAFE LISTENER NEW

56.1 Data Structures

Table 1: `UagAccountSafeListenerModel`

Attribute	Type	Required	Description
`id`	string		Read-only. Unique object identifier. Protected.
`access_denied`	object		Read-only. Expensive to use. Reasons why access is denied.
`account_id`	string	yes	Read-only. Uniqueness is required in the combination of attribute `account_id` with attributes `safe_id` and `listener_id`.
`safe_id`	string	yes	Read-only. Uniqueness is required in the combination of attribute `safe_id` with attributes `account_id` and `listener_id`.
`safe_name`	string		Read-only.
`listener_id`	string		Read-only. Uniqueness is required in the combination of attribute `listener_id` with attributes `account_id` and `safe_id`.
`listener_name`	string		Read-only.
`mode`	string		Read-only. Mode of operation. One of: `gateway`, `proxy`, `transparent`, `bastion`.
`protocol`	string		Read-only. Protocol used. One of: `http`, `modbus`, `mysql`, `tcp`, `tds`, `telnet`, `tn3270`, `tn5250`, `rdp`, `ssh`, `vnc`.

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Table 1 – continued from previous page

Attribute	Type	Required	Description
external_address	string	If protocol == rdp || http || telnet || tn3270 || tn5250 & tls_enabl == true	Listener address to present in Access Gateway.
external_port	number {from 1 to 65535}	If protocol == rdp || http || telnet || tn3270 || tn5250 & tls_enabl == true	Listener port to present in Access Gateway.
otp_enabled	boolean		Read-only. Whether OTP authentication is supported.
play_enabled	boolean		Read-only. Whether click-to-play is supported.
addresses	string[]		Read-only. List of listener addresses.
listen_port	number {from 1 to 65535}		Read-only. Listener port.
tls_enabled	boolean		Read-only. TLS enabled.
ssh_public_key_1	string		Read-only.
ssh_public_key_1	string	If protocol == ssh	Read-only. SSH public key MD5 fingerprint.
ssh_public_key_1	string	If protocol == ssh	Read-only. SSH public key SHA1 fingerprint.
tls_certificate_	string	If protocol == rdp || http || telnet || tn3270 || tn5250 & tls_enabl == true	Read-only. TLS certificate MD5 fingerprint.

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Table 1 – continued from previous page

Attribute	Type	Required	Description
tls_certificate_	string	If protocol == rdp || http || telnet || tn3270 || tn5250 & tls_enabl == true	Read-only. TLS certificate SHA1 fingerprint.
rdp_public_key_1	string	If protocol == rdp & tls_enabl == false	Read-only. RDP public key MD5 fingerprint.
rdp_public_key_1	string	If protocol == rdp & tls_enabl == false	Read-only. RDP public key SHA1 fingerprint.

56.2 Retrieve Available Attributes of the *UagAccountSafeListenerModel*

Request

Method	GET
Path	/api/v2/objspec/uag_account_safe_listener

GET /api/v2/objspec/uag_account_safe_listener

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/objspec/uag_account_safe_listener'
```

56.3 Get User Access Gateway / Safe / Listener Assignment

Request

Method	GET
Path	/api/v2/account_safe_listener

GET /api/v2/account_safe_listener

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  https://10.0.0.1/api/v2/account_safe_listener
```

Response


```
{
    "result": "success",
    "uag_account_safe_listener": [
        {
            "account_id": "8169529724050079750",
            "safe_id": "8169529724050079749",
            "safe_name": "Safe_2345",
            "listener_id": "8169529724050079746",
            "listener_name": "RDP:bastion",
            "mode": "bastion",
            "protocol": "rdp",
            "otp_enabled": true,
            "play_enabled": false,
            "addresses": [
                "10.31.116.195",
                "10.31.116.197",
                "10.31.116.196"
            ],
            "listen_port": 3389,
            "tls_enabled": true,
            "tls_certificate_fingerprint_md5":
↪"MD5:2f:6f:4c:3e:dd:bb:ba:06:83:92:2e:89:f5:98:39:2f",
            "tls_certificate_fingerprint_sha1":
↪"SHA1:2f:aa:62:aa:dd:2f:c8:10:7b:2f:4b:39:dd:43:4f:1a:8b:5a:dd:18"
        }
    ]
}
```

CHAPTER

FIFTYSEVEN

API V2: UAG - ACCOUNT ACCESS REQUEST NEW

Note

Access requests enable temporary, on-demand access to protected accounts. This mechanism is typically used in Just-in-Time (JIT) scenarios, where access must be explicitly approved before a connection can be established.

The access approval process is configured per Safe. To enable voting for access requests, set the `required_votes` parameter when creating or updating a Safe.

```
curl -s -k -X PATCH \
  -H 'Authorization: Bearer <token>' \
  -H 'Content-Type: application/json' \
  https://<host>/api/v2/safe/<safe_id> \
  -d '{"required_votes": 1}'
```

For details, refer to the *Safe configuration* section.

57.1 Data Structures

Table 1: `AccessRequestModel`

Attribute	Type	Required	Description
`id`	string		Read-only. Unique object identifier.
`user_id`	string		Immutable. Requesting user.
`status`	string		Read-only. Current request status. Expensive to use.
`type`	string	yes	Immutable. Access type. Allowed values: 'immediate', 'scheduled'.
`immediate_interv`	number {from 1 to 24}	If `type == immediate`	Requested time in hours. Expensive to use.
`starts_at`	datetime	If `type == scheduled`	Scheduled start time.
`expires_at`	datetime	If `type == scheduled`	Scheduled expiration time.
`reason`	string		Reason for requested access.

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Table 1 – continued from previous page

Attribute	Type	Required	Description
modified_at	datetime		Read-only.
account_id	string	yes	Read-only. Hidden. Account identifier. Expensive to use.
votes	object-array		Read-only. Vote history.
required_votes	string		Read-only. Number of required votes.
collected_votes	string		Read-only. Number of collected votes.

57.2 Retrieve Available Attributes of the *AccessRequestModel*

Request

Method	GET
Path	/api/v2/objspec/access_request

GET /api/v2/objspec/access_request

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/objspec/access_request'
```

57.3 Get Account Access Requests

Request

Method	GET
Path	/api/v2/account/<account_id>/access_request

GET /api/v2/account/<account_id>/access_request

Example Request

```
curl -s -k -X GET \
-H 'Authorization: sgfeea6jsaz4mum9su8w6' \
https://10.0.0.1/api/v2/account//8169529724050079761/access_request
```

Response

```
{
    "result": "success",
    "access_request": [
        {
            "id": "8169529724050079761",
            "user_id": "8169529724050079745",
            "status": "pending",
```

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```
            "type": "scheduled",
            "starts_at": "2025-07-08 05:55:00-07",
            "expires_at": "2025-08-06 15:00:00-07",
            "reason": "Maintenance session",
            "modified_at": "2025-07-08 05:58:16.361996-07",
            "votes": "[]",
            "required_votes": "1",
            "collected_votes": "0"
        }
    ]
}
```

57.4 Create Account Access Request

Request

Method	`POST`
Path	`/api/v2/account/<account_id>/access_request`
Headers	`Content-Type: application/json`
Body	`AccessRequestModel`

POST /api/v2/account/<account_id>/access_request

Example Request

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  https://10.31.116.196/api/v2/account/8169529724050079750/access_request \
  -d '{
        "safe_listener_ids": [
          {
            "safe_id": "8169529724050079749",
            "listeners_ids": ["8169529724050079746"]
          }
        ],
        "type": "scheduled",
        "reason": "Maintenance session",
        "starts_at": "20250708-12:55",
        "expires_at": "20250806-22:00"
      }'
```

Response

```
{
    "result": "success",
}
```

CHAPTER

FIFTYEIGHT

API V2: UAG - ACCOUNT REMOTE APPLICATIONS NEW

58.1 Data Structures

Table 1: `AccountRemoteAppModel`

Attribute	Type	Required	Description
`id`	string		Read-only. Unique object identifier. Expensive to use.
`name`	string	yes	Read-only. Remote application name.
`account_id`	string	yes	Read-only. ID of the associated account. Expensive to use.
`created_at`	datetime		Read-only. Timestamp of creation.
`modified_at`	datetime		Read-only. Timestamp of last modification.
`removed`	boolean		Read-only.

58.2 Retrieve Available Attributes of the *AccountRemoteAppModel*

Request

Method	`GET`
Path	`/api/v2/objspec/remote_app`

GET /api/v2/objspec/remote_app

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/objspec/remote_app'
```

58.3 List Remote Applications Assigned to Account

Request

Method	GET
Path	/api/v2/account/<account_id>/remote_apps

GET /api/v2/account/<account_id>/remote_apps

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  https://10.0.0.1/api/v2/account/8169529724050079749/remote_apps
```

Response

```
{
    "result": "success",
    "remote_app": [
        {
            "id": "8169529724050079745",
            "name": "firefox",
            "account_id": "8169529724050079749",
            "created_at": "2025-07-07 04:02:13.924887-07",
            "modified_at": "2025-07-07 04:02:13.924887-07"
        },
        {
            "id": "8169529724050079752",
            "name": "putty-constant-variables",
            "account_id": "8169529724050079749",
            "created_at": "2025-07-07 04:02:14.458032-07",
            "modified_at": "2025-07-07 04:02:14.458032-07"
        },
        {
            "id": "8169529724050079754",
            "name": "tightvnc",
            "account_id": "8169529724050079749",
            "created_at": "2025-07-07 04:02:14.52783-07",
            "modified_at": "2025-07-07 04:02:14.52783-07"
        }
    ]
}
```

CHAPTER

FIFTYNINE

API V2: UAG - ACCOUNT NOTES NEW

Note

The `note_access_level` attribute indicates the user's access to account-related notes:

- `none` – no access,
- `read` – read-only access,
- `write` – full access (read and modify).

This value is defined by the `note_access` setting on the associated Safe.

To change it via API, use the following request:

```
curl -s -k -X PATCH \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  https://<host>/api/v2/safe/<safe_id> \
  -d '{"note_access": "read"}'
```

For full details, refer to the section *API v2: Safes*.

59.1 Data Structures

Table 1: `AccountNoteModel`

Attribute	Type	Required	Description
`id`	string		Read-only. Account Note ID.
`account_id`	string	yes	Immutable. Account ID.
`note`	string	yes	Text of the note.
`created_at`	datetime		Read-only. Timestamp of creation.
`modified_at`	datetime		Read-only. Timestamp of modification.
`removed`	boolean		Read-only.

59.2 Retrieve Available Attributes of the *AccountNoteModel*

Request

Method	`GET`
Path	`/api/v2/objspec/account_note`

GET /api/v2/objspec/account_note

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/objspec/account_note'
```

59.3 Get Account Notes

Request

Method	`GET`
Path	`/api/v2/account/<account_id>/note`

GET /api/v2/account/<account_id>/note

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  https://10.0.0.1/api/v2/account/8169529724050079749/note
```

Response

```
{
    "note": "Note content.",
    "result": "success"
}
```

59.4 Update Account Note

Request

Method	`PATCH`
Path	`/api/v2/account/<account_id>/note`
Headers	`Content-Type: application/json`
Body	`AccountNoteModel`

PATCH /api/v2/account/<account_id>/note

Example Request

```
curl -s -k -X PATCH \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  https://10.0.0.1/api/v2/account/8169529724050079749/note \
  -d '{"note": "Updated note."}'
```

Response

```
{
    "note": "Updated note.",
    "result": "success"
}
```

CHAPTER

SIXTY

API V2: UAG - ACCOUNT HOTSEAT STATUS NEW

Note

- The `hotseat` check will return `true` (i.e., the account is considered in use) **only if** the `rdp_hotseat` option is enabled for the server associated with the account.
- This setting corresponds to the **"Inform about existing connection"** option in the server configuration UI.
- Only sessions that are **established via |product_name|** can be detected by this mechanism. Sessions opened outside of Fudo (e.g., direct RDP connections) will not trigger `hotseat: true`.

To enable it via API:

```
curl -s -k -X PATCH \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  https://<host>/api/v2/server/<server_id> \
  -d '{"rdp_hotseat": true}'
```

Without this option, the endpoint will always return `hotseat: false`, even if a session is active.

60.1 Data Structures

Table 1: `AccountHotseatModel`

Attribute	Type	Required	Description
`account_id`	string	yes	ID of an account to check.
`server_address`	string	yes	Address of a server to check.
`server_port`	number	yes	Port of a server to check.

60.2 Retrieve Available Attributes of the *AccountHotseatModel*

Request

Method	`GET`
Path	`/api/v2/objspec/account_hotseat`

GET /api/v2/objspec/account_hotseat

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/objspec/account_hotseat'
```

60.3 Request Hotseat Status

Request

Method	`POST`
Path	`/api/v2/account/<account_id>/hotseat`
Headers	`Content-Type: application/json`
Body	`AccountHotseatModel`

POST /api/v2/account/<account_id>/hotseat

Example Request

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  -d '{"server_address": "10.0.0.1", "server_port": 3389}' \
  https://10.0.0.1/api/v2/account/8169529724050079749/hotseat
```

Response

```
{
   "hotseat": true,
   "message": null,
   "result": "success"
}
```

CHAPTER

SIXTYONE

API V2: UAG - SECRET CHECKOUT AND CHECKIN NEW

61.1 Data Structures

Checkout Object Specification

Table 1: `CheckoutModel`

Attribute	Type	Required	Description
`account_id`	string	yes	Account of which secret is retrieved.
`session_id`	string		When checkout session is ongoing, it can be reused.
`reason`	string		Reason to checkout secret. Required when login_reason is set in the safe.
`force`	boolean; default value `true`		Overrides exclusive checkout limit if configured.

61.2 Retrieve Available Attributes of the *CheckoutModel*

Request

Method	`GET`
Path	`/api/v2/objspec/checkout`

GET /api/v2/objspec/checkout

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/objspec/checkout'
```

Checkin Object Specification

Table 2: `CheckinModel`

Attribute	Type	Required	Description
`session_id`	string	yes	Checkout session ID to stop.

61.3 Retrieve Available Attributes of the *CheckinModel*

Request

Method	`GET`
Path	`/api/v2/objspec/checkin`

GET /api/v2/objspec/checkin

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/objspec/checkin'
```

61.4 Checkout Secret

Request

Method	`POST`
Path	`/api/v2/secret/checkout`
Headers	`Content-Type: application/json`
Body	`CheckoutModel`

POST /api/v2/secret/checkout

Example Request

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  https://10.0.0.1/api/v2/secret/checkout \
  -d '{"account_id": "8169529724050079750", "reason": "emergency","force":false}
↪'
```

Note

- The `reason` field is optional and depends on the safe configuration. If not required, you can pass `"reason": null`.
- The `force` flag allows you to override exclusive checkout restrictions. If set to `false` and the password is already checked out, the system will wait until it is returned. To bypass this, set `force` to `true`.

Response

```
{
    "status": "approved",
    "session_id": "8169529724050079755",
```

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```
    "timeout": null,
    "confirmation_timeout": null,
    "reason": null,
    "pwd": "password",
    "login": "Administrator",
    "domain": null,
    "result": "success"
}
```


Note

- In the following response, the password was revealed as `"pwd": "password"` and checkout session ID as `"session_id": "8169529724050079755"`.
- If there is a Password checkout time limit set for this specific account, the timeout will present the time (in seconds) after which the password is returned automatically (e.g., `"timeout": 1800`).
- If the **Require approval** option is enabled in the safe configuration, the `confirmation_timeout` specifies the timeframe (in minutes) within which authorized users can approve or reject the access request.

61.5 Repeat Checkout in the Same Session

Note

This scenario is used if the **Require approval** option is enabled in the safe configuration. After the administrator approves the access request, the request must be sent once more with the `session_id` number included to reveal the password.

Example Request

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  https://10.0.0.1/api/v2/secret/checkout \
  -d '{"account_id": "8169529724050079750", "reason": "emergency","force":false,
↪"session_id": "8169529724050079755"}'
```

Response


```
{
    "status": "approved",
    "session_id": "8169529724050079755",
    "timeout": null,
    "confirmation_timeout": null,
    "reason": null,
    "pwd": "password",
```


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```
    "login": "Administrator",
    "domain": null,
    "result": "success"
}
```

61.6 Checkin Secret

To checkin the secret use `sesion_id` obtained in the checkout response.

Request

Method	`POST`
Path	`/api/v2/secret/checkin`
Headers	`Content-Type: application/json`
Body	`CheckinModel`

POST /api/v2/secret/checkin

Example Request

```
curl -s -k -X POST \
-H 'Authorization: sgfeea6jsaz4mum9su8w6' \
-H 'Content-Type: application/json' \
https://10.0.0.1/api/v2/secret/checkin \
-d '{"session_id": "8169529724050079755"}'
```

Response

```
{
    "result": "success"
}
```

CHAPTER

SIXTYTWO

API V2: UAG - ACCOUNT PASSWORD HISTORY NEW

62.1 List Password History Entries

Request

Method	GET
Path	/api/v2/account/<account_id>/secret_history

GET /api/v2/account/<account_id>/secret_history

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: proxycrypto' \
  "https://10.31.116.196/api/v2/account/8169529724050079750/secret_history?
↪filter=created_at.ge(2025-05-08T00:00:00Z),created_at.le(2025-07-08T23:59:59Z)
↪"
```

Response

```
{
    "items": [
        {
            "visible": true,
            "created_at": "2025-07-03T14:16:26.809242Z",
            "id": "4188347653454561300"
        },
        {
            "visible": true,
            "created_at": "2025-07-03T14:13:06.133029Z",
            "id": "4188347653454561299"
        },
        {
            "visible": true,
            "created_at": "2025-07-03T13:57:27.193281Z",
            "id": "4188347653454561282"
        }
    ],
    "result": "success"
}
```

62.2 Get Specific Historical Secret Value

> **Warning**
>
> This endpoint returns the historical password value in **plain text**. Access to this endpoint should be strictly controlled and limited to authorized users only.

Request

Method	`GET`
Path	`/api/v2/account/<account_id>/secret_history/<account_secret_id>`

GET /api/v2/account/<account_id>/secret_history/<account_secret_id>

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: proxycrypto' \
  "https://10.31.116.196/api/v2/account/816952972405007975O/secret_history/
↪4188347653454561300"
```

Response

```
{
    "pwd": "Secret",
    "result": "success"
}
```

CHAPTER

SIXTYTHREE

API V2: UAG - CHANGE PASSWORD NEW

63.1 Data Structures

Table 1: `ChangePasswordModel`

Attribute	Type	Required	Description
`state`	string		Change password state.
`password`	string	yes	Old or new password depending on state or prompt.

63.2 Retrieve Available Attributes of the *ChangePasswordModel*

Request

Method	`GET`
Path	`/api/v2/objspec/change_password`

GET /api/v2/objspec/change_password

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/objspec/change_password'
```

63.3 Change Password

Request

Method	`POST`
Path	`/api/v2/change-password`
Headers	`Content-Type: application/json`
Body	`ChangePasswordModel`

POST /api/v2/change-password

Example Request

```
curl -s -k -X POST \
-H 'Authorization: sgfeea6jsaz4mum9su8w6' \
-H 'Content-Type: application/json' \
https://10.0.0.1/api/v2/change-password \
-d '{"password": "new-password"}'
```

Response

```
{
    "result": "success"
}
```

CHAPTER

SIXTYFOUR

API V2: UAG - CHANGE LANGUAGE NEW

64.1 Data Structures

Table 1: `ChangeLanguageModel`

Attribute	Type	Required	Description
`lang`	string	yes	Language code. Possible values: `en`, `pl`, `ru`, `ua`, `kk`.

64.2 Retrieve Available Attributes of the *ChangeLanguageModel*

Request

Method	`GET`
Path	`/api/v2/objspec/change_language`

GET /api/v2/objspec/change_language

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/objspec/change_language'
```

64.3 Change Language

Request

Method	`POST`
Path	`/api/v2/change_language`
Headers	`Content-Type: application/json`
Body	`ChangeLanguageModel`

POST /api/v2/change_language

Example Request

```
curl -s -k -X POST \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  -H 'Content-Type: application/json' \
  https://10.0.0.1/api/v2/change_language \
  -d '{"lang": "pl"}'
```

Response

```
{
    "result": "success"
}
```

CHAPTER

SIXTYFIVE

API V2: UAG - OTP GENERATION NEW

65.1 Data Structures

Table 1: `OtpModel`

Attribute	Type	Required	Description
`account_id`	string	yes	The account for which the OTP is generated.
`safe_id`	string	yes	Safe identifier.
`listener_id`	string	If `webclient == false`	Required if OTP is generated for RDP native client use.
`server_address`	string		Valid IPv4, IPv6 or hostname.
`port`	number		Connection port. Defaults to standard port if not set.
`account_login`	string		Login for the account.
`webclient`	boolean; default value `false`		Whether the OTP is for a Webclient.

65.2 Retrieve Available Attributes of the *OtpModel*

Request

Method	`GET`
Path	`/api/v2/objspec/otp`

GET /api/v2/objspec/otp

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/objspec/otp'
```

65.3 Generate OTP

Request

Method	POST
Path	/api/v2/secret/otp
Headers	Content-Type: application/json
Body	OtpModel

POST /api/v2/secret/otp

Example Request

```
curl -s -k -X POST \
    -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
    -H 'Content-Type: application/json' \
    https://10.0.0.1/api/v2/secret/otp \
    -d '{"account_id": "8169529724050079750", "safe_id": "816952972405007974
↪"webclient":true,"server_address":"10.0.136.1","port":3389}'
```

Response

```
{
    "otp": "80434736YPxLckb4Wy_9f8Vuv7Z3OGv_",
    "result": "success"
}
```

CHAPTER

SIXTYSIX

API V2: UAG - GENERATING RDP CONFIGURATION NEW

66.1 Data Structures

Table 1: `RdpConfigModel`

Attribute	Type	Required	Description
`host`	string	yes	Destination host.
`port`	number	yes	Connection port.
`otp`	string	yes	One-time password for RDP connection.
`app`	string		RemoteApp name (if applicable).
`suffix`	string		Optional suffix for session URL.
`safe_id`	string		Identifier of the Safe.

66.2 Retrieve Available Attributes of the *RdpConfigModel*

Request

Method	`GET`
Path	`/api/v2/objspec/rdp_config`

GET /api/v2/objspec/rdp_config

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  'https://10.0.214.98/api/v2/objspec/rdp_config'
```

66.3 Generate RDP Configuration

Request

Method	`POST`
Path	`/api/v2/safe/rdp_config`
Headers	`Content-Type: application/json`
Body	`RdpConfigModel`

POST /api/v2/safe/rdp_config

Example Request

```
curl -s -k -X POST \
    -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
    -H 'Content-Type: application/json' \
    https://10.0.0.1/api/v2/safe/rdp_config \
    -d '{
      "host": "10.31.116.195",
      "port": 3389,
      "otp": "80434736wemPxwmZnKsC8wQxjbUZ3axv",
      "app": "8169529724050079745",
      "suffix": "remoteapp-account",
      "safe_id": "8169529724050079745"
    }'
```

Note

The one-time password (`otp`) required in this request can be generated using the `POST /api/v2/secret/otp` endpoint. For more information, refer to the *API v2: UAG - OTP Generation* ***NEW*** section.

Response

```
full address:s:10.31.116.195:3389
username:s:80434736wemPxwmZnKsC8wQxjbUZ3axv
prompt for credentials:i:1
password:s:
remoteapplicationmode:i:1
remoteapplicationprogram:s:remoteapp:8169529724050079745%
```

CHAPTER

SIXTYSEVEN

API V2: UAG - SESSION TIMEOUT CHECK NEW

67.1 Get Session Timeout

Request

Method	GET
Path	/api/v2/session/timeout

GET /api/v2/session/timeout

Example Request

```
curl -s -k -X GET \
  -H 'Authorization: sgfeea6jsaz4mum9su8w6' \
  https://10.0.0.1/api/v2/session/timeout
```

Response

```
{
    "timeout_uag": 15,
    "result": "success"
}
```