

# Package: mx.api (via r-universe)

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**Title** Minimal Matrix Client-Server API

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**Description** A minimal-dependency client for the 'Matrix' Client-Server HTTP API <<https://spec.matrix.org/>>, suitable for talking to a 'Synapse' <<https://element-hq.github.io/synapse/>> or 'Conduit' <<https://conduit.rs/>> homeserver. Covers login, room management, message send and history, media upload or download, and the transport endpoints needed to coordinate end-to-end encryption (device-key and one-time-key publication, key query and claim, to-device events). Encryption itself is out of scope; pair with a separate crypto package.

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**URL** <https://github.com/cornball-ai/mx.api>

**BugReports** <https://github.com/cornball-ai/mx.api/issues>

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**Description**

A minimal-dependency client for the 'Matrix' Client-Server HTTP API <<https://spec.matrix.org/>>, suitable for talking to a 'Synapse' <<https://element-hq.github.io/synapse/>> or 'Conduit' <<https://conduit.rs/>> homeserver. Covers login, room management, message send and history, media upload or download, and the transport endpoints needed to coordinate end-to-end encryption (device-key and one-time-key publication, key query and claim, to-device events). Encryption itself is out of scope; pair with a separate crypto package.

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**Maintainer**

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---

mx\_canonical\_json      *Encode a value as Matrix canonical JSON*

---

**Description**

Produces the canonical JSON byte sequence the Matrix specification requires for signed objects: object keys sorted by UTF-8 byte sequence, no insignificant whitespace, raw UTF-8 for non-ASCII strings, integers only (no floats, no exponents, no decimal places, within  $[-(2^{53})+1, (2^{53})-1]$ ), and rejection of NaN, Inf, NA values, and NA or duplicate object keys. The output is the exact byte sequence to feed into an ed25519 signer.

**Usage**

```
mx_canonical_json(x)
```

**Arguments**

x                      An R value: NULL, atomic vector, or list.

**Details**

R named lists become JSON objects; unnamed lists and length > 1 atomic vectors become arrays. Length-1 atomics become scalars. To force a length-1 value to encode as an array, wrap it in a single-element `list(...)` or in `I()` (AsIs values are always encoded as arrays, names dropped, mirroring jsonlite).

**Value**

A length-1 UTF-8 character string. The result is the exact byte sequence to write to disk or feed to an ed25519 signer; non-ASCII content is preserved as raw UTF-8 bytes (jsonlite-style `\uXXXX` escaping is not used).

**Examples**

```
mx_canonical_json(list(b = 2, a = 1))
# "{\"a\":1,\"b\":2}"
```

```
mx_canonical_json(list(key = "abc"))
# "{\"key\":\"abc\"}"
```

---

mx_delete_device	<i>Delete a device</i>
------------------	------------------------

---

**Description**

Removes a device and invalidates its access token. Most homeservers protect this with user-interactive authentication: the first call fails with `M_FORBIDDEN` or a 401 carrying a flows object, and the caller retries with a completed auth payload, e.g. `list(type = "m.login.password", identifier = list(type = "m.id.user", user = "bot"), password = "...", session = "<from the 401>")`. `mx.api` deliberately does not automate that exchange.

**Usage**

```
mx_delete_device(session, device_id, auth = NULL)
```

**Arguments**

<code>session</code>	An "mx_session" object.
<code>device_id</code>	Character. The device to delete.
<code>auth</code>	List or NULL. Completed user-interactive auth payload.

**Value**

Invisibly TRUE on success.

**Examples**

```
## Not run:
mx_delete_device(s, "OLDDEVICE", auth = list(
  type = "m.login.password",
  identifier = list(type = "m.id.user", user = "bot"),
  password = "secret"
))

## End(Not run)
```

---

mx_devices	<i>List this account's devices</i>
------------	------------------------------------

---

**Description**

List this account's devices

**Usage**

```
mx_devices(session)
```

**Arguments**

session            An "mx\_session" object.

**Value**

A list of devices, each with device\_id, display\_name, last\_seen\_ip, and last\_seen\_ts.

**Examples**

```
## Not run:  
vapply(mx_devices(s), function(d) d$device_id, character(1))  
  
## End(Not run)
```

---

mx_download	<i>Download a media file by mxc URI</i>
-------------	---

---

**Description**

Download a media file by mxc URI

**Usage**

```
mx_download(session, mxc_url, dest)
```

**Arguments**

session            An "mx\_session" object.  
mxc\_url            Character. An "mxc://server/id" URI.  
dest                Character. Destination file path.

**Value**

The destination path, invisibly.

## Examples

```
## Not run:  
mx_download(s, "mxc://matrix.example/abc123", tempfile())  
  
## End(Not run)
```

---

mx\_get\_account\_data    *Get account data*

---

## Description

Reads a global account-data event for a user, e.g. "m.direct" (the DM room map) or any custom namespaced type.

## Usage

```
mx_get_account_data(session, type, user_id = session$user_id)
```

## Arguments

session	An "mx_session" object.
type	Character. Event type, e.g. "m.direct".
user_id	Character. Defaults to the session's own user.

## Value

The account-data content as a list, or NULL when the type has never been set.

## Examples

```
## Not run:  
direct <- mx_get_account_data(s, "m.direct")  
  
## End(Not run)
```

---

mx_get_state	<i>Get a room state event</i>
--------------	-------------------------------

---

### Description

Read-side counterpart of `mx_set_state`, e.g. to check whether a room is encrypted before joining the send path.

### Usage

```
mx_get_state(session, room_id, event_type, state_key = "")
```

### Arguments

<code>session</code>	An "mx_session" object.
<code>room_id</code>	Character. The room ID.
<code>event_type</code>	Character. State event type, e.g. "m.room.encrypted".
<code>state_key</code>	Character. State key (default empty string).

### Value

The state event content as a list, or NULL when the state event is not set.

### Examples

```
## Not run:
enc <- mx_get_state(s, "!abc:example", "m.room.encrypted")
is.null(enc) # FALSE in an encrypted room

## End(Not run)
```

---

mx_guess_mime	<i>Guess a MIME type from a file extension</i>
---------------	--

---

### Description

The extension table `mx.api` uses for uploads, exported so callers do not maintain their own. Unknown extensions fall back to "application/octet-stream".

### Usage

```
mx_guess_mime(path)
```

### Arguments

<code>path</code>	Character. File path or name.
-------------------	-------------------------------

**Value**

Character MIME type.

**Examples**

```
mx_guess_mime("clip.mp4")
mx_guess_mime("notes.txt")
```

---

mx_keys_claim	<i>Claim one-time keys for an Olm handshake</i>
---------------	---

---

**Description**

POST `/_matrix/client/v3/keys/claim`. The `one_time_keys` argument selects which algorithm to claim for each `(user_id, device_id)` pair.

**Usage**

```
mx_keys_claim(session, one_time_keys, timeout = 10000L)
```

**Arguments**

<code>session</code>	An <code>mx_session</code> .
<code>one_time_keys</code>	Named list. Names are user ids; values are named lists mapping device ids to the desired algorithm (typically "signed_curve25519").
<code>timeout</code>	Integer milliseconds. Server-side timeout when talking to remote homeservers.

**Value**

Parsed response with the claimed keys keyed by `user_id -> device_id -> "<algorithm>:<key_id>" -> key_object`.

**Examples**

```
## Not run:
mx_keys_claim(s, list(
  "@alice:example.org" = list(ABCD1234 = "signed_curve25519")
))

## End(Not run)
```

---

mx_keys_query	<i>Query device keys for one or more users</i>
---------------	--

---

### Description

POST `/_matrix/client/v3/keys/query`. Each entry in `device_keys` maps a Matrix user id to a character vector of device ids to request. An empty character vector requests all of the user's devices.

### Usage

```
mx_keys_query(session, device_keys, timeout = 10000L)
```

### Arguments

<code>session</code>	An <code>mx_session</code> .
<code>device_keys</code>	Named list. Names are Matrix user ids (e.g. <code>"@alice:example.org"</code> ); values are character vectors of device ids, or character <code>(0)</code> for "all devices".
<code>timeout</code>	Integer milliseconds. Time the server should wait for remote homeservers before returning a partial result.

### Value

Parsed response with a `device_keys` map of `user_id` -> `device_id` -> `device_keys_object`.

### Examples

```
## Not run:
mx_keys_query(s, list("@alice:example.org" = character()))

## End(Not run)
```

---

mx_keys_upload	<i>Upload device identity and one-time keys</i>
----------------	---

---

### Description

POST `/_matrix/client/v3/keys/upload`. The `device_keys` and `one_time_keys` arguments must be fully formed and signed per the Matrix specification; `mx.api` will not canonicalise or sign them. Use `mx_canonical_json` to produce the byte sequence to sign.

### Usage

```
mx_keys_upload(session, device_keys = NULL, one_time_keys = NULL,
               fallback_keys = NULL)
```

**Arguments**

session	An mx_session.
device_keys	Named list. The device_keys object as defined in the Matrix spec, including user_id, device_id, algorithms, keys, and the signatures block produced by the caller's signer. Pass NULL to upload only one-time keys.
one_time_keys	Named list or NULL. Map from "<algorithm>:<key_id>" (e.g. "signed_curve25519:AAAA") to the signed key object. Pass NULL or an empty list to skip.
fallback_keys	Named list or NULL. Same shape as one_time_keys; used to advertise a fallback key when the OTK pool is exhausted.

**Value**

The parsed homeserver response, including one\_time\_key\_counts.

**Examples**

```
## Not run:
mx_keys_upload(s, device_keys = signed_dk, one_time_keys = signed_otks)

## End(Not run)
```

---

mx_login	<i>Log in to a Matrix homeserver</i>
----------	--------------------------------------

---

**Description**

Authenticates with a Matrix homeserver using password login and returns a session object carrying the access token and device id.

**Usage**

```
mx_login(server, user, password, device_id = NULL)
```

**Arguments**

server	Character. Homeserver base URL (e.g. "https://matrix.example").
user	Character. User localpart or full Matrix ID.
password	Character. Account password.
device_id	Character or NULL. Reuse an existing device id.

**Value**

An object of class "mx\_session".

**Examples**

```
## Not run:  
s <- mx_login("https://matrix.example", "alice", "hunter2")  
  
## End(Not run)
```

---

mx_logout	<i>Log out of a Matrix session</i>
-----------	------------------------------------

---

**Description**

Invalidates the access token on the homeserver.

**Usage**

```
mx_logout(session)
```

**Arguments**

session      An "mx\_session" object.

**Value**

Invisible NULL.

**Examples**

```
## Not run:  
mx_logout(s)  
  
## End(Not run)
```

---

mx_media_config	<i>Query the homeserver's media configuration</i>
-----------------	---

---

**Description**

Asks the server for its media limits, chiefly `m.upload.size` (maximum upload bytes), so callers can check a file fits before uploading. Tries the v1 endpoint and falls back to the legacy location for older homeservers.

**Usage**

```
mx_media_config(session)
```

**Arguments**

session            An "mx\_session" object.

**Value**

A list; `$`m.upload.size`` is the upload cap in bytes (may be absent if the server does not advertise one).

**Examples**

```
## Not run:
cap <- mx_media_config(s)$`m.upload.size`
file.size("clip.mp4") <= cap

## End(Not run)
```

---

mx_messages	<i>Fetch historical messages from a room</i>
-------------	--

---

**Description**

Thin wrapper over the `/rooms/{id}/messages` endpoint.

**Usage**

```
mx_messages(session, room_id, from = NULL, dir = "b", limit = 50L)
```

**Arguments**

session            An "mx\_session" object.  
room\_id            Character. The room ID.  
from                Character or NULL. Pagination token; NULL starts at the most recent message.  
dir                 Character. "b" (backwards, default) or "f" (forwards).  
limit               Integer. Maximum events to return.

**Value**

A list with fields `chunk`, `start`, `end`.

**Examples**

```
## Not run:
mx_messages(s, "!abc:matrix.example", limit = 20L)

## End(Not run)
```

---

mx_profile	<i>Get a user's profile</i>
------------	-----------------------------

---

**Description**

Get a user's profile

**Usage**

```
mx_profile(session, user_id = session$user_id)
```

**Arguments**

session	An "mx_session" object.
user_id	Character. Defaults to the session's own user.

**Value**

A list with displayname and avatar\_url (either may be absent when unset).

**Examples**

```
## Not run:
mx_profile(s)$displayname

## End(Not run)
```

---

mx_react	<i>Send a reaction (annotation) to a room event</i>
----------	---

---

**Description**

Posts an m.reaction event tying key (usually a thumbs-up or other emoji) to event\_id. Matrix reactions are plain events under the hood; they relate to the target via m.annotation.

**Usage**

```
mx_react(session, room_id, event_id, key)
```

**Arguments**

session	An "mx_session" object.
room_id	Character. The room ID.
event_id	Character. The event being reacted to.
key	Character. The reaction key (usually an emoji).

**Value**

The event ID of the sent reaction.

**Examples**

```
## Not run:
mx_react(s, "!abc:matrix.example", "$eventid", "thumbs-up")

## End(Not run)
```

---

mx_read_receipt	<i>Send a read receipt for a room event</i>
-----------------	---

---

**Description**

Public receipt (`m.read`) advances the "seen" marker in other clients; private receipt (`m.read.private`) only advances the bot's own view. Defaults to public so user clients show "seen by @bot".

**Usage**

```
mx_read_receipt(session, room_id, event_id,
                receipt_type = c("m.read", "m.read.private"))
```

**Arguments**

<code>session</code>	An "mx_session" object.
<code>room_id</code>	Character. The room ID.
<code>event_id</code>	Character. The event to mark as read.
<code>receipt_type</code>	Character. "m.read" (default) or "m.read.private".

**Value**

Invisible NULL.

**Examples**

```
## Not run:
mx_read_receipt(s, "!abc:matrix.example", "$eventid")

## End(Not run)
```

---

mx_redact	<i>Redact an event</i>
-----------	------------------------

---

**Description**

Removes the content of a message, reaction, or other event. This is how Matrix deletes things.

**Usage**

```
mx_redact(session, room_id, event_id, reason = NULL, txn_id = NULL)
```

**Arguments**

session	An "mx_session" object.
room_id	Character. The room ID.
event_id	Character. The event to redact.
reason	Character or NULL. Optional human-readable reason.
txn_id	Character or NULL. Transaction id (generated if NULL).

**Value**

The event ID of the redaction event.

**Examples**

```
## Not run:
mx_redact(s, "!abc:example", "$someevent", reason = "typo")

## End(Not run)
```

---

mx_register	<i>Register a new account on a Matrix homeserver</i>
-------------	--

---

**Description**

Creates a new user via POST `/_matrix/client/v3/register` using the `m.login.dummy` auth flow. Most homeservers only accept this when open registration is enabled (or a registration token is supplied). On success returns a ready-to-use `mx_session` — registration also logs the new user in.

**Usage**

```
mx_register(server, username, password, device_id = NULL,
            initial_device_display_name = NULL, inhibit_login = FALSE)
```

**Arguments**

server	Character. Homeserver base URL.
username	Character. Desired localpart (e.g. "alice").
password	Character. Account password.
device_id	Character or NULL. Device id to assign; a server-generated one is used if NULL.
initial_device_display_name	Character or NULL. Human-readable label for the device.
inhibit_login	Logical. When TRUE, the server creates the account but does not return a session; the call returns a list with the new user_id instead of an mx_session.

**Value**

An mx\_session object on login, or a list with user\_id when inhibit\_login = TRUE.

**Examples**

```
## Not run:
s <- mx_register("https://matrix.example", "alice", "hunter2")

## End(Not run)
```

---

mx_room_create	<i>Create a room</i>
----------------	----------------------

---

**Description**

Create a room

**Usage**

```
mx_room_create(session, name = NULL, topic = NULL, visibility = "private",
               preset = NULL, invite = character())
```

**Arguments**

session	An "mx_session" object.
name	Character or NULL. Human-readable room name.
topic	Character or NULL. Room topic.
visibility	Character. "private" (default) or "public".
preset	Character or NULL. A Matrix room preset ("private_chat", "trusted_private_chat", "public_chat").
invite	Character vector. Matrix IDs to invite.

**Value**

The new room ID as a character string.

**Examples**

```
## Not run:
room_id <- mx_room_create(s, name = "test", topic = "hello")

## End(Not run)
```

---

mx_room_invite	<i>Invite a user to a room</i>
----------------	--------------------------------

---

**Description**

Invitation at creation time is covered by `mx_room_create()`; this covers the other common lifecycle case, inviting into an existing room.

**Usage**

```
mx_room_invite(session, room_id, user_id)
```

**Arguments**

session	An "mx_session" object.
room_id	Character. The room ID.
user_id	Character. The Matrix ID to invite.

**Value**

Invisibly TRUE on success.

**Examples**

```
## Not run:
mx_room_invite(s, "!abc:example", "@friend:example.org")

## End(Not run)
```

---

mx_room_join	<i>Join a room by ID or alias</i>
--------------	-----------------------------------

---

**Description**

Join a room by ID or alias

**Usage**

```
mx_room_join(session, room)
```

**Arguments**

session	An "mx_session" object.
room	Character. Room ID (!abc:server) or alias (#name:server).

**Value**

The joined room ID.

**Examples**

```
## Not run:  
mx_room_join(s, "#general:matrix.example")  
  
## End(Not run)
```

---

mx_room_leave	<i>Leave a room</i>
---------------	---------------------

---

**Description**

Leave a room

**Usage**

```
mx_room_leave(session, room_id)
```

**Arguments**

session	An "mx_session" object.
room_id	Character. The room ID.

**Value**

Invisible NULL.

**Examples**

```
## Not run:
mx_room_leave(s, "!abc:matrix.example")

## End(Not run)
```

---

mx_room_members	<i>List the members of a room</i>
-----------------	-----------------------------------

---

**Description**

List the members of a room

**Usage**

```
mx_room_members(session, room_id)
```

**Arguments**

session	An "mx_session" object.
room_id	Character. The room ID.

**Value**

Character vector of Matrix user IDs currently joined.

**Examples**

```
## Not run:
mx_room_members(s, "!abc:matrix.example")

## End(Not run)
```

---

mx_room_name	<i>Get a room's human-readable name</i>
--------------	---

---

**Description**

Reads the m.room.name state event. Returns NULL if the room has no name set or the state event is inaccessible.

**Usage**

```
mx_room_name(session, room_id)
```

**Arguments**

session	An "mx_session" object.
room_id	Character. The room ID.

**Value**

Character scalar or NULL.

**Examples**

```
## Not run:
mx_room_name(s, "!abc:matrix.example")

## End(Not run)
```

---

mx_room_topic	<i>Get a room's topic</i>
---------------	---------------------------

---

**Description**

Reads the m.room.topic state event. Returns NULL if the room has no topic set or the state event is inaccessible.

**Usage**

```
mx_room_topic(session, room_id)
```

**Arguments**

session	An "mx_session" object.
room_id	Character. The room ID.

**Value**

Character scalar or NULL.

**Examples**

```
## Not run:
mx_room_topic(s, "!abc:matrix.example")

## End(Not run)
```

---

mx_rooms	<i>List rooms the user has joined</i>
----------	---------------------------------------

---

**Description**

List rooms the user has joined

**Usage**

```
mx_rooms(session)
```

**Arguments**

session	An "mx_session" object.
---------	-------------------------

**Value**

Character vector of room IDs.

**Examples**

```
## Not run:
mx_rooms(s)

## End(Not run)
```

---

mx_send	<i>Send a message to a room</i>
---------	---------------------------------

---

**Description**

Send a message to a room

**Usage**

```
mx_send(session, room_id, body, msgtype = "m.text", extra = NULL)
```

**Arguments**

session	An "mx_session" object.
room_id	Character. The room ID.
body	Character. The message body.
msgtype	Character. Matrix msgtype, default "m.text".
extra	List or NULL. Extra fields merged into the event content (e.g. formatted body, reply relation).

**Value**

The event ID of the sent message.

**Examples**

```
## Not run:
mx_send(s, "!abc:matrix.example", "hello world")

## End(Not run)
```

---

mx_send_event	<i>Send an arbitrary room event</i>
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---

**Description**

Generic counterpart to [mx\\_send](#) for event types other than `m.room.message`, such as `m.room.encrypted`. The content is sent verbatim.

**Usage**

```
mx_send_event(session, room_id, event_type, content, txn_id = NULL)
```

**Arguments**

session	An "mx_session" object.
room_id	Character. The room ID.
event_type	Character. The event type, e.g. "m.room.encrypted".
content	List. The event content, sent as-is.
txn_id	Character or NULL. Transaction id (generated if NULL).

**Value**

The event ID of the sent event.

**Examples**

```
## Not run:
mx_send_event(s, "!abc:example", "m.room.encrypted", encrypted_content)

## End(Not run)
```

---

mx_send_media	<i>Send a media file to a room</i>
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---

### Description

Uploads path to the media repository and posts an `m.room.message` referencing it. The default info carries mimetype and size; pass richer metadata (width, height, duration) yourself – `mx.api` deliberately does not inspect media files.

### Usage

```
mx_send_media(session, room_id, path, body = basename(path), msgtype = NULL,
              content_type = NULL, info = list())
```

```
mx_send_file(session, room_id, path, body = basename(path),
              content_type = NULL, info = list())
```

```
mx_send_image(session, room_id, path, body = basename(path),
               content_type = NULL, info = list())
```

```
mx_send_audio(session, room_id, path, body = basename(path),
               content_type = NULL, info = list())
```

```
mx_send_video(session, room_id, path, body = basename(path),
               content_type = NULL, info = list())
```

### Arguments

session	An "mx_session" object.
room_id	Character. The room ID.
path	Character. Path to the file to upload.
body	Character. Message body / filename shown by clients.
msgtype	Character or NULL. One of "m.file", "m.image", "m.audio", "m.video". NULL (the default) derives it from the MIME type, so a .mp4 posts as m.video without being told.
content_type	Character or NULL. MIME type (guessed from the extension when NULL).
info	List. Extra fields merged into the info object.

### Value

The event ID of the sent message.

**Examples**

```
## Not run:
mx_send_media(s, "!abc:example", "clip.mp4", msgtype = "m.video")

## End(Not run)
```

---

mx\_send\_to\_device      *Send a to-device event*

---

**Description**

PUT `/_matrix/client/v3/sendToDevice/{eventType}/{txnId}`. Used to ship encrypted Olm payloads (e.g. `m.room_key` carriers wrapped as `m.room.encrypted`) to specific (`user_id`, `device_id`) targets.

**Usage**

```
mx_send_to_device(session, event_type, messages, txn_id = NULL)
```

**Arguments**

<code>session</code>	An <code>mx_session</code> .
<code>event_type</code>	Character. The to-device event type, e.g. <code>"m.room.encrypted"</code> .
<code>messages</code>	Named list. Outer names are user ids; values are named lists mapping device id (or the wildcard <code>"*"</code> ) to the event content.
<code>txn_id</code>	Character or NULL. Idempotency key; auto-generated when NULL.

**Value**

Invisible NULL (the server returns an empty body on success).

**Examples**

```
## Not run:
mx_send_to_device(s, "m.room.encrypted", list(
  "@bob:example.org" = list(BBBB = encrypted_content)
))

## End(Not run)
```

---

mx_session	<i>Reconstruct a session from saved credentials</i>
------------	---

---

**Description**

Reconstruct a session from saved credentials

**Usage**

```
mx_session(server, token, user_id, device_id)
```

**Arguments**

server	Character. Homeserver base URL.
token	Character. Access token from a prior login.
user_id	Character. Full Matrix ID (e.g. "@troy:example.org").
device_id	Character. Device id from the prior login.

**Value**

An object of class "mx\_session".

**Examples**

```
s <- mx_session(  
  server = "https://matrix.example",  
  token = "syt...",  
  user_id = "@alice:matrix.example",  
  device_id = "ABC123"  
)
```

---

mx_set_account_data	<i>Set account data</i>
---------------------	-------------------------

---

**Description**

Writes a global account-data event for a user. The content replaces whatever was stored under type.

**Usage**

```
mx_set_account_data(session, type, content, user_id = session$user_id)
```

**Arguments**

session	An "mx_session" object.
type	Character. Event type, e.g. "m.direct".
content	List. The content, sent as-is.
user_id	Character. Defaults to the session's own user.

**Value**

Invisibly TRUE on success.

**Examples**

```
## Not run:  
mx_set_account_data(s, "ai.cornball.notes", list(theme = "dark"))  
  
## End(Not run)
```

---

mx\_set\_avatar\_url      *Set this user's avatar*

---

**Description**

Set this user's avatar

**Usage**

```
mx_set_avatar_url(session, avatar_url)
```

**Arguments**

session	An "mx_session" object.
avatar_url	Character. An mxc:// URI, typically from <a href="#">mx_upload</a> .

**Value**

Invisibly TRUE on success.

**Examples**

```
## Not run:  
uri <- mx_upload(s, "avatar.png")  
mx_set_avatar_url(s, uri)  
  
## End(Not run)
```

---

mx\_set\_displayname      *Set this user's display name*

---

**Description**

Set this user's display name

**Usage**

```
mx_set_displayname(session, displayname)
```

**Arguments**

session	An "mx_session" object.
displayname	Character. The new display name.

**Value**

Invisibly TRUE on success.

**Examples**

```
## Not run:
mx_set_displayname(s, "cornelius")

## End(Not run)
```

---

mx\_set\_state              *Set a room state event*

---

**Description**

Generic state setter, e.g. to mark a room encrypted by putting an m.room.encrypted event.

**Usage**

```
mx_set_state(session, room_id, event_type, content, state_key = "")
```

**Arguments**

session	An "mx_session" object.
room_id	Character. The room ID.
event_type	Character. State event type, e.g. "m.room.encrypted".
content	List. The state content, sent as-is.
state_key	Character. State key (default empty string).

**Value**

The event ID of the state event.

**Examples**

```
## Not run:
mx_set_state(s, "!abc:example", "m.room.encryption",
             list(algorithm = "m.megolm.v1.aes-sha2"))

## End(Not run)
```

---

 mx\_sync

*One-shot sync against the homeserver*


---

**Description**

Calls /sync once and returns immediately. For streaming behaviour, the caller writes its own loop, passing the previous batch's next\_batch token as since.

**Usage**

```
mx_sync(session, since = NULL, timeout = 0L, filter = NULL)
```

**Arguments**

session	An "mx_session" object.
since	Character or NULL. Sync token from a prior sync.
timeout	Integer. Long-poll timeout in milliseconds (0 returns immediately).
filter	Character or NULL. Filter ID or inline JSON filter.

**Value**

The parsed sync response, including next\_batch.

**Examples**

```
## Not run:
batch <- mx_sync(s)
next_batch <- batch$next_batch

## End(Not run)
```

---

mx_typing	<i>Send a typing notification</i>
-----------	-----------------------------------

---

**Description**

Shows (or clears) the session user's typing indicator in a room. Useful bot polish while a slow reply is being generated.

**Usage**

```
mx_typing(session, room_id, typing = TRUE, timeout = 30000L)
```

**Arguments**

session	An "mx_session" object.
room_id	Character. The room ID.
typing	Logical. TRUE to show typing, FALSE to clear it.
timeout	Integer. How long the indicator lasts, in milliseconds (ignored when typing = FALSE).

**Value**

Invisibly TRUE on success.

**Examples**

```
## Not run:
mx_typing(s, "!abc:example", TRUE)
# ... generate the reply ...
mx_typing(s, "!abc:example", FALSE)

## End(Not run)
```

---

mx_upload	<i>Upload a file to the homeserver media repository</i>
-----------	---

---

**Description**

Upload a file to the homeserver media repository

**Usage**

```
mx_upload(session, path, content_type = NULL, filename = NULL)
```

**Arguments**

session	An "mx_session" object.
path	Character. Local file path.
content_type	Character or NULL. MIME type; guessed from the file extension if NULL.
filename	Character or NULL. Filename advertised to the server.

**Value**

An "mxc://" URI as a character string.

**Examples**

```
## Not run:
uri <- mx_upload(s, "photo.png")

## End(Not run)
```

---

mx_whoami	<i>Return the identity of the current session</i>
-----------	---

---

**Description**

Return the identity of the current session

**Usage**

```
mx_whoami(session)
```

**Arguments**

session	An "mx_session" object.
---------	-------------------------

**Value**

A list with user\_id and device\_id.

**Examples**

```
## Not run:
mx_whoami(s)

## End(Not run)
```

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