

NetStone API

- [API](#)
 - [Release Notes](#)
 - [RabbitMQ](#)
- [API Client](#)
 - [Release Notes](#)
- [SDK](#)
 - [Release Notes](#)

API

Release Notes

4.3.0

01. May 26

This release has a lot of changes under the hood. Almost nothing should change for consumers of the API, but the entire parsing logic was revamped. The parser now relies on the attributes of the Lodestone CSS selectors and uses more uniform logic for different kinds of parses.

New

- SDK library licenses now shown on license page

Maintenance

- Revamped parser
 - This should not have any consumer facing changes, but it will improve maintainability and reliability
- Total minion and mount numbers updated for 7.5
- Add gear rarity, icon links, and dye to tests
- Add facewear, soul crystal, and HP to tests

Fixed

- Gear parsing broken after 7.5 update
 - Lodestone now loads gear lazily
- TownIcon was always null
- Log level for HttpClient was wrong in certain environments

4.2.0

20. Mar 26

This release switches to a fork of NetStone and the XIVAPI Lodestone CSS selectors. This allows for certain new features that did not get merged into the original projects. It is now possible to retrieve the facewear slot that got added in Dawntrail. Since Dawntrail had launched, retrieving the dye of gear was broken and hadn't been part of NetStone API. This is now fixed, and the second dye slot added. Lastly, gear and glammers now return icon URLs.

New

- Facewear
 - To not introduce breaking changes and require an API V5, facewear is returned the same way other pieces of gear are. Since facewear is unlocked by a specific item, this item is returned as if it were a piece of glamour.
- Gear Dye
 - Both dye slots are returned with their name, colour (hex code), and database link
- Icon URLs for gear
 - Both the gear itself and glamour pieces now include icon URLs
 - Icon URLs are from the Lodestone itself
- Gear rarity
 - The rarity of equipped gear is now returned
 - New enum: Common, Magic, Uncommon, Rare, Epic

Maintenance

- Switch to NetStone fork
- GitHub workflow now runs directly on runner to drastically speed up build times
 - Build was previously running inside a Docker container

Fixed

- Kerberos library error during startup
 - This was purely a cosmetic error and did not affect functionality
- Fix excessive logging of Microsoft.AspNetCore packages

Removed

- NetStone.Queue project
 - RabbitMQ functionality was disabled in version 4.0.0, this removes the unused project

4.1.3

28. Dec 25

Fixed

- Compose file was not updated for version 4.1.2, now correctly points towards 4.1.3

4.1.2

28. Dec 25

Fixed

- Two libraries were missing from Licenses page
- Staging environment was pointing towards production instance of FFXIV ID

4.1.1

28. Dec 25

Changed

- "Cachelmages" parameter now overrides "MaxAge" if images have never been cached before
 - If images have been cached at any point, "MaxAge" behaves as usual

4.1.0

28. Dec 25

This release adds S3 storage for avatars and portraits. Previously, only the URL to the image on Square's servers was cached. If Square updated the images on their side, there would be a mismatch between all other cached data and these updated images. This version optionally allows for the images themselves to be cached separately.

New

- Optional "Cachelmages" parameter for Character endpoint
 - Avatar and portrait are saved to S3 storage
 - Checksum is checked each time to avoid duplicate uploads

4.0.1

21. Dec 25

Fixed

- Compose file was pointing to wrong URL in reverse proxy configuration
- Old MIT license file was still present

4.0.0

21. Dec 25

This is a huge maintenance release and changes various things under the hood. Most importantly, it introduces API V4. This version reorders API paths to follow REST standards, and expands fallback values. Multiple values can now be sent together for more granular control over when a fallback happens. The API now uses FFXIV ID for authentication, and runs on .NET 10.

New

- New homepage: <https://netstone.eorzea.online>
- API V4
 - Paths now follow rest standards
 - "Character/{lodestoneld}/Minions" instead of "Character/Minions/{lodestoneld}"
 - Fallback Type is now a flags enum and offers more values
 - Multiple values can be submitted together (this is not supported inside Swagger UI, but generally works)
- Use FFXIV ID for authentication

Changed

- Default API version is now 4
 - This default would usually only change on a X.1 release, but this is a completely new deployment under a new URL

Maintenance

- Total minion and mount numbers updated for 7.4
- Runtime upgrade to .NET 10
- Switch to Apache-2.0 license
- Upgrade to new unit testing package
- Container images are now built with GitHub Workflow
- Container images are now pushed to GitHub Container Registry automatically
- GitHub releases are now created automatically
- Added global.json to better control .NET upgrades
- Compose files for Dev, Staging, and Production environments now tracked through repository

Fixed

- Character search test would return two characters and fail

Removed

- RabbitMQ and Jaeger tracing services disabled as they are currently unused
 - Code is still available and services may be reactivated when necessary

3.2.1

19. Jun 25

Some oddities during Lodestone maintenances have happened previously, so I used the most recent maintenance window to fix some minor bugs.

Fixed

- API would return 404 Not Found for FC members if they were being refreshed from the Lodestone during maintenance
- Character and Free Company search threw 500 instead of returning 503 during Lodestone maintenance

3.2.0

20. May 25

This release extends fallback support by handling the more granular privacy settings the Lodestone added. New endpoints allow retrieving characters and free companies from cache by name, and the landing page now shows libraries and their licenses.

New

- Support for more granular privacy settings on profile
 - 503 now returned if profile generally accessible, but details are hidden
- Endpoints for retrieving characters and free companies from cache by name
 - /Character/ByName/{name}/{world}
 - /FreeCompany/ByName/{name}/{world}
 - Result is always loaded from cache
- Libraries and their licenses shown on <https://netstone.api.tawmy.net/libs>

Changed

- Mount and minion counts now loaded from configuration instead of requiring code changes
- 404 response codes not printed to console anymore

Removed

- API V2

3.1.1

30. Apr 25

Changed

- Total minion and mount numbers updated for 7.21

Fixed

- GlamourName and CreatorName returned empty string instead of being null if not set
 - Properties were already nullable, now they actually return null
 - Potentially a breaking change if client does not handle nullability for these properties correctly

3.1.0

20. Apr 25

Version 3.0.0 added fallback support for when the Lodestone is entirely unreachable. This version extends this by also allowing fallbacks when the Lodestone is down for maintenance or when a profile is private. If no fallback is used, a 503 HTTP Status Code is returned.

A new .NET SDK replaces the existing API Client, and there is various maintenance-related changes too.

New

- .NET SDK
 - Rebuilt from the ground up for dependency injection, this new SDK replaces the existing NetStone API Client.
 - Changelog [here](#)
 - Basic usage guide [here](#)
- Handle private profiles and Lodestone maintenance
 - NetStone returns an empty object when either of these apply
 - API now has a check for when essential properties are empty and returns an 503 HTTP Status Code
 - When FallbackType is set to Any, fallback is used
 - Check added for Free Companies as well, but is untested
- Data protection for ASP.NET Core encryption keys
 - Keys are encrypted using X.509 certificate and stored in database
- Health checks for database and data protection certificate expiry
- Tracing data now recorded for mapping extensions
- Global exception handler for HTTP Status Code 404 and 503 results

Changed

- Default API version is now 3
- API version 2 marked as obsolete
 - Will be removed in a future release
- When retrieving free company members, full character profiles are only queued once
 - They were previously queued per-character, this should greatly improve performance
- Parsing class jobs throws more appropriate exception
- Remove redundant Console.WriteLine calls to prevent duplicate exception output

3.0.1

24. Mar 25

Changed

- useFallback parameter accepts "None", "Http", and "Any" values now
 - Previously it was simple bool
 - "Any" behaves as previous "true", catching all exceptions
 - "Http" catches HttpRequestExceptions only
 - HttpRequestException is thrown when connection to the Lodestone fails (eg. when it's down, rate limited, etc)
 - Other exceptions are likely to be parsing bug and swallowing them may not be desired

Fixed

- Landing page "OpenAPI Spec" button was opening V2 API spec

Maintenance

- Fallbacks are logged as warnings

Breaking Changes

- useFallback type changed from bool to FallbackType enum

3.0.0

23. Mar 25

This version adds fallback support in case the Lodestone is unreachable. It also adds OpenTelemetry metrics and tracing support. Metrics give me insight in how much the API is used and whether it can process all requests. Tracing data allows me to tune performance and if things went wrong, see where they did.

New

- API V3 with fallback support
 - New useFallback parameter
 - If set and parsing fails, API returns cached data
 - New V3 DTOs have fallbackUsed and fallbackReason properties for transparency
 - AutoMapper removed in API V3, replaced with manual mapping
- OpenTelemetry Metrics
 - Helps getting an overview over how much each endpoint is used, how long requests take on average, and how many fail
- OpenTelemetry Tracing
 - Helps getting insight into how long each part of a request takes exactly, for performance optimisations
- New unit tests comparing API V2 and V3 responses

Maintenance

- Runtime upgrade to .NET 9
- Switch to MIT license

Fixed

- Free Company focus mapping
- Character not assigned to achievements if retrieved after achievements were already cached
- Error while retrieving free company members in edge case where character was retrieved before, but free company was not
- Free Company not always updated when player changed/left FC

Removed

- API V1

Breaking Changes

- API V1 removed
- None in Grand Company affiliation renamed to NotSpecified

2.1.2

03. Jan 25

Fixed

- Exception while attempting to cache character that had a name or world change

2.1.1

05. Nov 24

Fixed

- Page margin too large on mobile
- Landing page scrolling horizontally on mobile
- Demo too wide on mobile once data loaded

2.1.0

03. Nov 24

New

- [Landing Page](#)
 - Basic introduction to the project
 - Demo for retrieving data
 - Links to Changelog, Swagger UI, and OpenAPI definition
- "Data refreshed" exchanges
 - Previous queues were published to queues whenever data was requested through queue, no matter whether it was cached or not
 - New exchanges are published to whenever data is refreshed from Lodestone, not when it was cached

Changed

- Outgoing queues are now exchanges
 - See "Breaking Changes" for further details
- Default API version is now 2
- API version 1 marked as obsolete
 - Will be removed in a future release
- Swagger UI now always available

Breaking Changes

- Outgoing RabbitMQ messages are now published to exchanges instead of queues
 - Allows fanout exchange to publish messages to multiple queues
 - Requires manual configuration of exchange -> queue binding
 - If RabbitMQ was used before, both exchange and queue will exist and only

2.0.3

28. Sep 24

Fixed

- Free company members failed to parse if at least one of its members had been cached before

2.0.2

27. Sep 24

Fixed

- Grand Company parsing fails under certain circumstances

2.0.1

22. Sep 24

Changed

- Version is printed to console on startup

2.0.0

22. Sep 24

Complete revamp of the API. Instead of simply parsing and returning NetStone data, Lodestone data is now mapped onto database entities and cached. Retrieving character data can now return cached data as DTOs, or refresh data from the Lodestone and return as said DTOs.

New

- Character achievement parsing
- NetStone entity to database mapping
- **Caching of database entities**
 - Character + attributes
 - Character ClassJobs
 - Character Minions
 - Character Mounts
 - Character Achievements
 - Free Company
 - Free Company Memberes
- **NetStone.Api.Client project for easy data retrieval in .NET projects**
- Various unit tests to compare parsed data and data mapped to database entities and DTOs
- Additional properties in DTOs like whether data is cached, when it was last refreshed, and collection totals + percentages
- RabbitMQ support for all endpoints

1.1.0

15. Jul 24

New

- Dawntrail Jobs parsing
 - They were ignored before, now data is actually being parsed

1.0.3

01. Jul 24

Fixed

- Exception when parsing Dawntrail jobs

1.0.2

15. Apr 24

Fixed

- Exception when parsing free company rankings for free companies without ranking(s)

1.0.1

27. Jan 24

Fixed

- Exception when parsing disciples of the hand/land

1.0.0

25. Jan 24

Initial Release

- Character parsing
 - Character
 - ClassJobs
 - Minions
 - Mounts
- Free Company parsing
 - Free Company
 - Free Company members

RabbitMQ

This feature was removed in version 4.0.0.

Queues (inbound)

| Name | REST API method | Associated Exchanges (see below for details) |
|-------------------------------------|---|---|
| netstone-get-character | /Character/{lodestoneId} | netstone-get-character-result netstone-get-character-refreshed |
| netstone-get-character-class-jobs | /Character/ClassJobs/{lodestoneId} | netstone-get-character-class-jobs-result netstone-get-character-class-jobs-refreshed |
| netstone-get-character-minions | /Character/Minions/{lodestoneId} | netstone-get-character-minions-result netstone-get-character-minions-refreshed |
| netstone-get-character-mounts | /Character/Mounts/{lodestoneId} | netstone-get-character-mounts-result netstone-get-character-mounts-refreshed |
| netstone-get-character-achievements | /Character/Achievements/{lodestoneId} | netstone-get-character-achievements-result netstone-get-character-achievements-refreshed |
| netstone-get-free-company | /FreeCompany/{lodestoneId} | netstone-get-free-company-result netstone-get-free-company-refreshed |
| netstone-get-free-company-members | /FreeCompany/Members/{lodestoneId} | netstone-get-free-company-members-result netstone-get-free-company-members-refreshed |

Exchanges (outbound)

| Name | Sent When |
|-------------------------------|---|
| netstone-get-character-result | Character data requested through queue. |

| Name | Sent When |
|---|--|
| netstone-get-character-refreshed | Character data refreshed from Lodestone. |
| netstone-get-character-class-jobs-result | Character's class jobs requested through queue. |
| netstone-get-character-class-jobs-refreshed | Character's class jobs refreshed from Lodestone. |
| netstone-get-character-minions-result | Character's minions requested through queue. |
| netstone-get-character-minions-refreshed | Character's minions refreshed from Lodestone. |
| netstone-get-character-mounts-result | Character's mounts requested through queue. |
| netstone-get-character-mounts-refreshed | Character's mounts refreshed from Lodestone. |
| netstone-get-character-achievements-result | Character's achievements requested through queue. |
| netstone-get-character-achievements-refreshed | Character's achievements refreshed from Lodestone. |
| netstone-get-free-company-result | Free Company data requested through queue. |
| netstone-get-free-company-refreshed | Free Company data refreshed from Lodestone. |
| netstone-get-free-company-members-result | Free Company's members requested through queue. |
| netstone-get-free-company-members-refreshed | Free Company's members refreshed from Lodestone. |

- "result" exchanges are always (cached or not) filled when data was requested through inbound queue, NOT when requested through API.

- "refreshed" exchanges are filled whenever data was refreshed from the Lodestone, no matter whether through inbound queue or API. It is however NOT filled when data was returned from cache.

API Client

Release Notes

This project has been archived and replaced with [NetStone API SDK](#).

3.0.1

24. Mar 25

Breaking Changes

- useFallback parameter now uses FallbackType enum instead of bool

3.0.0

23. Mar 25

New

- API V3 & Fallback support
 - Methods now have optional useFallback parameter
 - If set to true and parsing fails, API returns cached data
 - New V3 DTOs have fallbackUsed and fallbackReason properties for transparency

Maintenance

- Runtime upgrade to .NET 9
- Switch to MIT license

Breaking Changes

- DTOs have gotten split into V2 and V3
 - DTOs used by client now have V3 suffix

2.1.0

03. Nov 24

New

- Resilience
 - Client now tries a request again if it fails
 - Replaces previous logic for access token refresh

Fixed

- Typo in "Craftsmanship" attribute

Maintenance

- Check amount of members returned by free company members endpoint
 - One error case was previously not caught by not checking length
- Add missing free companies from NetStone API to client tests

2.0.3

29. Sep 24

Fixed

- Free Company members were not being received

2.0.2

27. Sep 24

Fixed

- Wrong primary attributes for Ninja and Viper

Maintenance

- Add additional character tests previously added to API

2.0.1

22. Sep 24

Maintenance

- Use common extension for version output

2.0.0

22. Sep 24

Initial Release

- Full support for all NetStone API methods
 - Character
 - Free Company

SDK

Release Notes

4.3.0

01. May 26

This release is really only a maintenance release. No consumer facing changes are included.

Maintenance

- Readme updated for new domains and exception type
- Tests migrated to Xunit 3
- Workaround added for enum parsing regression in Refit 10.1.6

4.2.0

20. Mar 26

This release adds support for the new features introduced in NetStone API 4.2.0. Please refer to the API changelog for details.

New

- Facewear
- Gear Dye
- Icon URLs for gear
- Gear rarity

4.1.0

28. Dec 25

This release adds support for the new "CacheImages" parameter and updates the Readme for signed JWT client authentication.

New

- Support for "CacheImages" parameter on Character GET endpoint

Maintenance

- Readme updated to replace client secret with paths for signed JWT client authentication

4.0.9

22. Dec 25

Maintenance

- Update `AspNetCoreExtensions.Keycloak` package to expose `app.MapJwtEndpoint()` extension method

4.0.8

22. Dec 25

4.0.2 to 4.0.7 were me trying to figure out how NuGet packaging works for submodules. Version 4.0.8 replaces all that by using a NuGet package for `NetStone.Common` instead.

Fixed

- `NetStone.Common` contents unavailable because submodule was not added to NuGet package

4.0.1

21. Dec 25

Fixed

- GitHub workflow was pushing to wrong NuGet package
 - Package was technically correct, but it included redundant "Tawmy." prefix
 - It's just "NetStone.Api.Sdk" now

4.0.0

21. Dec 25

The SDK is now a NuGet package! Because NetStone API now uses FFXIV for authentication, the SDK mandates the use of signed JWT client authentication instead of a client secret. The certificate used for signed JWT authentication must use ECDSA.

New

- The SDK is now a NuGet package! It can be found here: <https://www.nuget.org/packages/NetStone.Api.Sdk>
 - Only version 4.0.1 and onwards, 4.0.0 falsely included a prefix in its title
- Use FFXIV ID for authentication
 - The client now uses JWT client authentication instead of a client secret
 - ECDSA certificate required
- API V4
 - Support for Fallback Type as a flags enum
- ClassJob enum now includes ShortNames (eg. SCH for Scholar)

Maintenance

- Runtime upgrade to .NET 10
- Switch to Apache-2.0 license
- NuGet packages are now created and pushed to the NuGet registry automatically
- Added global.json to better control .NET upgrades

Breaking Changes

- New client required as NetStone API now uses FFXIV ID for authentication
- Signed JWT (ECDSA) replaces client secret authentication

3.2.0

20. May 25

New

- Support for custom request timeouts
 - Requesting achievements can take time, so increasing the default may be desired
- Retrieval of characters and free companies from cache by name
- NetStoneException carries more information about errors

Breaking Changes

- "V3" removed from entity names

3.1.2

26. Apr 25

Purely a maintenance update to keep the NetStone Common module up to date.

3.1.1

25. Apr 25

The old NetStone API Client threw `NotFoundExceptions` if the response status code was a 404. The new SDK instead threw an `ApiException`, which was a breaking change and required a dependency on/an import of Refit. It now throws `NotFoundExceptions` again, and a generic `NetStoneException` on other unsuccessful response status codes.

Fixed

- Exceptions would require dependency on/import of Refit
 - Errors now throw `NetStoneException`
- 404 responses would throw `Refit ApiException` instead of `NetStone Common NotFoundException`
 - 404 responses now throw `NotFoundException`, just like `NetStone API Client` used to

3.1.0

20. Apr 25

Initial Release

- Built for dependency injection
- Default .NET resilience handler with extended timeouts built-in
- Support for all Character and Free Company endpoints
- Basic usage guide at <https://github.com/Tawmy/NetStone.Api.Sdk>
- Replaces previous `NetStone.Api.Client`