Query string

Stability: 2 - Stable

Source Code: lib/querystring.js

The `node:querystring` module provides utilities for parsing and formatting URL query strings. It can be accessed using:

```
const querystring = require('node:querystring'); copy
```

`querystring` is more performant than <URLSearchParams> but is not a standardized API. Use <URLSearchParams> when performance is not critical or when compatibility with browser code is desirable.

querystring.decode()

The `querystring.decode()` function is an alias for `querystring.parse()`. Added in: v0.1.99

querystring.encode()

The `querystring.encode()` function is an alias for `querystring.stringify()`. Added in: v0.1.99

querystring.escape(str)

Added in: v0.1.25

- `str` <string>

The `querystring.escape()` method performs URL percent-encoding on the given `str` in a manner that is optimized for the specific requirements of URL query strings.

The `querystring.escape()` method is used by `querystring.stringify()` and is generally not expected to be used directly. It is exported primarily to allow application code to provide a replacement percent-encoding implementation if necessary by assigning `querystring.escape` to an alternative function.

querystring.parse(str[, sep[, eq[, options]]])

▶ History

- `str` <string> The URL query string to parse
- `sep` <string> The substring used to delimit key and value pairs in the query string. **Default:** `'&'`.
- `eq` <string>. The substring used to delimit keys and values in the query string. **Default:** `'='`.
- `options` <Object>
  - `decodeURIComponent` <Function> The function to use when decoding percent-encoded characters in the query string. **Default:** `querystring.unescape()`.

- `maxKeys` <number> Specifies the maximum number of keys to parse. Specify `0` to remove key counting limitations. **Default:** `1000`.

The `querystring.parse()` method parses a URL query string (`str`) into a collection of key and value pairs.

For example, the query string `'foo=bar&abc=xyz&abc=123'` is parsed into:

```
{
  "foo": "bar",
  "abc": ["xyz", "123"]
} copy
```

The object returned by the `querystring.parse()` method *does not* prototypically inherit from the JavaScript `Object`. This means that typical `Object` methods such as `obj.toString()`, `obj.hasOwnProperty()`, and others are not defined and *will not work*.

By default, percent-encoded characters within the query string will be assumed to use UTF-8 encoding. If an alternative character encoding is used, then an alternative `decodeURIComponent` option will need to be specified:

```
// Assuming gbkDecodeURIComponent function already exists...

querystring.parse('w=%D6%D0%CE%C4&foo=bar', null, null,
                  { decodeURIComponent: gbkDecodeURIComponent }); copy
```

```
querystring.stringify(obj[, sep[, eq[, options]]])
```

Added in: v0.1.25

- `obj` <Object> The object to serialize into a URL query string
- `sep` <string> The substring used to delimit key and value pairs in the query string. **Default:** `'&'`.
- `eq` <string>. The substring used to delimit keys and values in the query string. **Default:** `'='`.
- `options`
  - `encodeURIComponent` <Function> The function to use when converting URL-unsafe characters to percent-encoding in the query string. **Default:** `querystring.escape()`.

The `querystring.stringify()` method produces a URL query string from a given `obj` by iterating through the object's "own properties".

It serializes the following types of values passed in `obj`: <string> | <number> | <bigint> | <boolean> | <string[]> | <number[]> | <bigint[]> | <boolean[]> The numeric values must be finite. Any other input values will be coerced to empty strings.

```
querystring.stringify({ foo: 'bar', baz: ['qux', 'quux'], corge: '' });
// Returns 'foo=bar&baz=qux&baz=quux&corge='

querystring.stringify({ foo: 'bar', baz: 'qux' }, ';', ':');
// Returns 'foo:bar;baz:qux' copy
```

By default, characters requiring percent-encoding within the query string will be encoded as UTF-8. If an alternative encoding is required, then an alternative `encodeURIComponent` option will need to be specified:

```
// Assuming gbkEncodeURIComponent function already exists,

querystring.stringify({ w: '中文', foo: 'bar' }, null, null,
                      { encodeURIComponent: gbkEncodeURIComponent }); copy
```

```
querystring.unescape(str)
```

- `str` <string>

Added in: v0.1.25

The `querystring.unescape()` method performs decoding of URL percent-encoded characters on the given `str`.

The `querystring.unescape()` method is used by `querystring.parse()` and is generally not expected to be used directly. It is exported primarily to allow application code to provide a replacement decoding implementation if necessary by assigning `querystring.unescape` to an alternative function.

By default, the `querystring.unescape()` method will attempt to use the JavaScript built-in `decodeURIComponent()` method to decode. If that fails, a safer equivalent that does not throw on malformed URLs will be used.