

isIPv4MappedIPv6

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isIPv4MappedIPv6

Kind: Function**Source:** `src/utils/ipaddr.ts`**Part of:** [Utils](#)

Check if a binary IPv6 address is an IPv4-mapped IPv6 address (::ffff:x.x.x.x)

`isIPv4MappedIPv6` checks whether a binary IPv6 address matches the IPv4-mapped IPv6 form: `::ffff:x.x.x.x`. It helps address parsing and routing code identify IPv6 byte arrays that represent embedded IPv4 addresses.

Signature

```
function isIPv4MappedIPv6(ipv6binary: bigint): boolean
```

Parameters

Name	Type
<code>ipv6binary</code>	<code>bigint</code>

Returns: `boolean`

Diagram

```
graph LR
  A[Binary IPv6 address] --> B[isIPv4MappedIPv6]
  B --> C{Matches ::ffff IPv4-mapped prefix?}
  C -->|Yes| D[true]
  C -->|No| E[false]
```

Usage

```
import { isIPv4MappedIPv6 } from './utils/ipaddr.js'

function handleAddress(binaryAddress: Uint8Array): void {
  if (isIPv4MappedIPv6(binaryAddress)) {
    console.log('Address is an IPv4-mapped IPv6 address')
    return
  }

  console.log('Address is not IPv4-mapped')
}
```

AI Coding Instructions

- Pass the binary IPv6 byte representation; do not pass a textual IP address directly.
- Keep this check before extracting or handling the embedded IPv4 portion of an address.
- Preserve the byte order produced by the IPv6 parser when passing addresses to this function.
- Test both IPv4-mapped and non-mapped IPv6 byte arrays when changing address parsing code.

Used by

1 reference from 1 file. Each is a place in this repository where the symbol is actually used — go read one rather than trusting an example.

Imported by (1)

- `IPRestrictionRule` — `src/middleware/ip-restriction/index.ts` :38