Engineer

RSS

the older of the two XML formats a feed is written in

What it is

RSS is an XML format for publishing a feed: one `channel` element that describes a site and holds a list of `item` elements, each a post with a link, a date and some text, at an address that feed readers fetch on a schedule. Its specification spells the name out as Really Simple Syndication, many people say “RSS feed” for a feed in any format, and RSS 1.0, “RDF Site Summary”, is a separate format built on RDF rather than an earlier version of the one in use today.

The format began at Netscape, which published RSS 0.90 in March 1999 and 0.91 that July. UserLand published its own 0.91 in June 2000, then 0.92 and, in August 2002, RSS 2.0. The Berkman Klein Center at Harvard Law School published 2.0.1, written by Dave Winer, in July 2003, and the RSS Advisory Board has kept the text since, under a Creative Commons licence. Its roadmap says the format is, for all practical purposes, frozen at 2.0.1. The board has published revisions of the document since, the current one in March 2009, but new needs are met by extensions in their own XML namespaces rather than by new versions of RSS.

A document is small. Its root is an `rss` element whose `version` attribute must be `2.0`, holding a single `channel`. The channel needs a `title`, a `link` and a `description`. Every element of an item is optional, as long as the item has at least a title or a description. Everything else, from `pubDate` and `guid` to the channel’s `image` and `ttl`, is there when a publisher wants it:

```
<?xml version="1.0" encoding="UTF-8"?>
<rss version="2.0">
  <channel>
    <title>Example Notes</title>
    <link>https://example.com/</link>
    <description>Short notes on running servers.</description>
    <item>
```

```
      <title>Moving the database</title>
      <link>https://example.com/notes/db-move/</link>
      <guid isPermaLink="true">https://example.com/notes/db-move/</guid>
      <pubDate>Sat, 17 Oct 2026 09:00:00 GMT</pubDate>
      <description>Why the move took one evening.</description>
    </item>
  </channel>
</rss>
```

Use the concept in a decision

Put “What is RSS?” to work in a real decision. We can help relate the concept to the system you are building or buying. A site that is quick, findable and editable by your own staff, without a bill for every change of wording.

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Test the assumptions behind the term

Use the explanation and linked work to frame questions for your project. We can examine the assumptions with you before a tool is chosen. Developed 100 web applications using HTML/HTML5 — 100 web applications built

Developed 100 web applications using HTML/HTML5 Get in touch →

Why it matters

RSS is loose, and the looseness is what a publisher has to understand. An item’s `description` may hold plain text or HTML escaped into the element, and nothing in the file says which, so the reader decides. The `guid` is optional, so without one a reader works out by itself whether an item is new. Dates follow RFC 822, an email standard from 1982, as strings such as `Sat, 17 Oct 2026 09:00:00 GMT` with English day and month names, and the specification still allows a two-digit year. And the format has no way to declare a base URL, so a relative link inside an item has nothing reliable to be resolved against.

The board’s answer is the RSS Best Practices Profile, published in October 2007: recommendations for documents that work across the wide range of software that reads them. It asks for a `guid` on every item and for absolute URLs in links and descriptions. It reports that the only date forms every aggregator it tested handled were in Universal Time, ending in `GMT`, `+0000` or `-0000`. It also documents an `atom:link` with `rel="self"` that names the feed’s own address. A feed written to the profile leaves its readers far less to guess.

Two extensions carry most of what a modern feed adds. `atom:link` borrows that element from Atom. `content:encoded`, from a module first written for RSS 1.0, holds an item’s full HTML. The profile describes using both together, the full text in `content:encoded` and a shorter summary in `description`, and found that, when

an item carried both, six of the eight aggregators it tested displayed `content:encoded` and ignored the summary. The `enclosure` element attaches a media file to an item with three required attributes, its `url`, its `length` in bytes and its MIME `type`.

Frozen is also a strength. A format that has not changed since 2003 is a fixed target, and a feed written to it today is read by software written against the same text years ago. Atom closes most of the gaps above by specification, so the case for publishing RSS as well is about readers rather than rigour: some take only RSS, and an RSS address handed out years ago is still being polled.

What it looks like in practice

This site publishes RSS 2.0 at `/index.xml`, next to an Atom feed and a JSON Feed. The credits page explains why there are two XML feeds: all three carry the full text, and there are two XML feeds rather than one because some readers take only one of the two and neither is reliably the one. The same page links the RSS feed to the W3C Feed Validator, beside the Atom feed, so that anyone can run the check without taking the site's word for anything.

The page about reading the site from a terminal treats the feeds as data. It says the portfolio is syndicated in three formats, each carrying the full text of every item rather than a teaser, and fetches the RSS one with nothing more than `curl`:

```
curl -s https://engineer.company/index.xml
```

Where it goes wrong

The channel's picture is missing, and the validator objects. A reader shows no image beside the feed's name, and the W3C service warns about the image format. RSS's `image` element is the strictest picture element of the three feed formats: GIF, JPEG or PNG only, at most 144 pixels wide and 400 high. A social share card in WebP is the wrong file for it. This site's RSS template points `image` at its 144-pixel PNG icon instead, and the comment beside it records that the WebP card had drawn an `ImageUrlFormat` warning, caught by validating again after the change.

Items sort in the wrong order, and nothing reports it. A reader lists new items below old ones, or shows them with the wrong date. RSS dates are strings, so an ISO 8601 date, a misspelt layout or a day name in another language still makes well-formed XML, and only the reader's date parser notices. In Hugo, a template's `Format` method on a date writes English names, while the `time.Format` function localises them; a Danish `pubDate` is not an RFC 822 date. This site formats each `pubDate` with the method, from a layout kept in one partial template together with Atom's, and the comment there says a typo in either is not a build failure but a feed that parses and sorts wrongly in somebody else's reader.

Icons in a post draw nothing, and the validator lists errors. The full text in `content:encoded` leaves its page, so anything that depends on the page goes missing. An SVG icon that points into a sprite defined elsewhere on the page draws nothing in a reader, and the W3C service flags the `svg` itself. This site's feeds get their headings without the brand's cog divider for that reason; the comment on that template records that the validator had reported twelve `Non-html tag: svg` messages and six complaints about a `role` attribute.

Links inside a post go nowhere. A subscriber follows a link in an item and lands on a missing page, or on nothing at all. A root-relative link such as `/notes/` works on the web page because the browser knows the page's address, but an RSS document cannot declare a base URL. The profile says a description should not contain relative URLs and that an aggregator may try to resolve one against the channel's `link`; a reader that does not try leaves the link broken. Write every link in a feed's HTML as an absolute URL.

Two categories with the same word look like one. An item tagged in two vocabularies shows a term twice, or a reader merges two terms that mean different things. RSS's `category` element takes an optional `domain` attribute that names the vocabulary a term comes from. This site's RSS template writes it on every category, because, as its comment says, without the domain the two vocabularies' overlapping terms would read as duplicates.

Further reading

- RSS 2.0 Specification — the RSS Advisory Board's text of the format, element by element, with the roadmap that declares it frozen.
- RSS Best Practices Profile — the board's recommendations, with what it found when it tested real aggregators.

- RSS History — every version from Netscape's 0.90 to the current text, with dates and publishers.
- RDF Site Summary (RSS) 1.0 — the separate RDF-based format that shares the name.
- RFC 822 — the 1982 email standard whose date and time syntax RSS still uses.

Glossary

Choose for your actual constraints

Describe the workflow, the existing interfaces and the users who need the change. We can define a testable delivery and a handover that lets your team maintain it.

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Make the terminology practical

Ask how "What is RSS?" applies to your organisation. A concrete example from your current system is enough to start the discussion.

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welcome@engineer.company +45 50 10 61 84 Copenhagen, Denmark

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