# Declaring powerful capabilities

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# Background and motivation

Permission prompts for notifications:

● Very common.

● Often abused (e.g. prompt at page load or annoying in-page pre-prompts).

● Perceived as annoying by users.

● Even in "good" use cases, notification permission flows are likely interrupting user flows.

# Issues

- No way for the site to give any more context around why, when, how… the site wants to send notifications.

- Often no way for the user to take a meaningful decision.

- No good time to ask for notification permission.

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Reminds of https://github.com/mikewest/purposeful-permissions

# A declarative way?

```
<script type="permissiondeclaration">
{
  "capabilities": [
    {
      "type": "notifications",
      "service_worker": "/sw-push.js",
      "daily_volume": 3,
      "example_notification": <notification-data>,
      "purpose": "Receive notifications about
incoming emails and chat messages",
      "settings": "/notification-settings.html"
    }
  ]
}
</script>
```
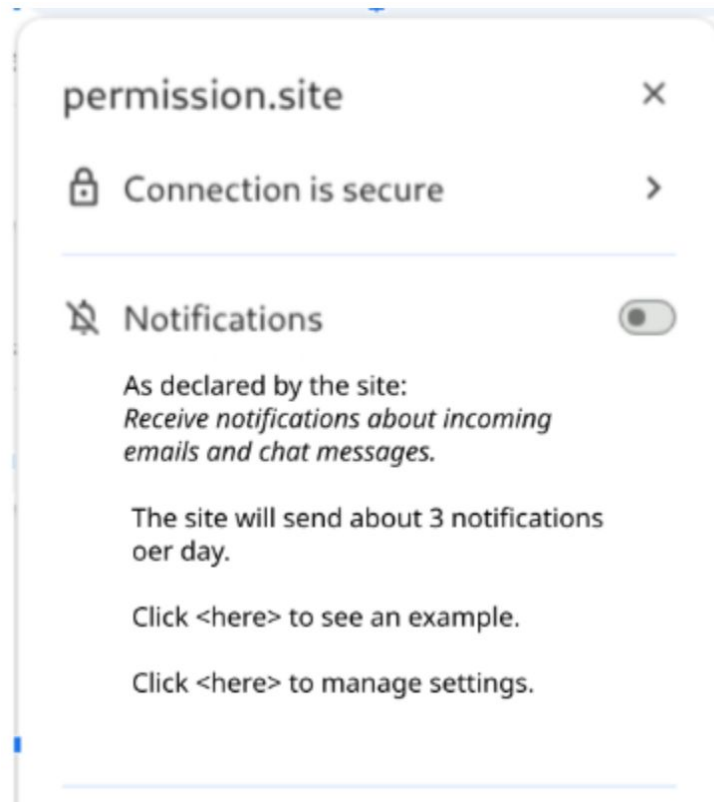
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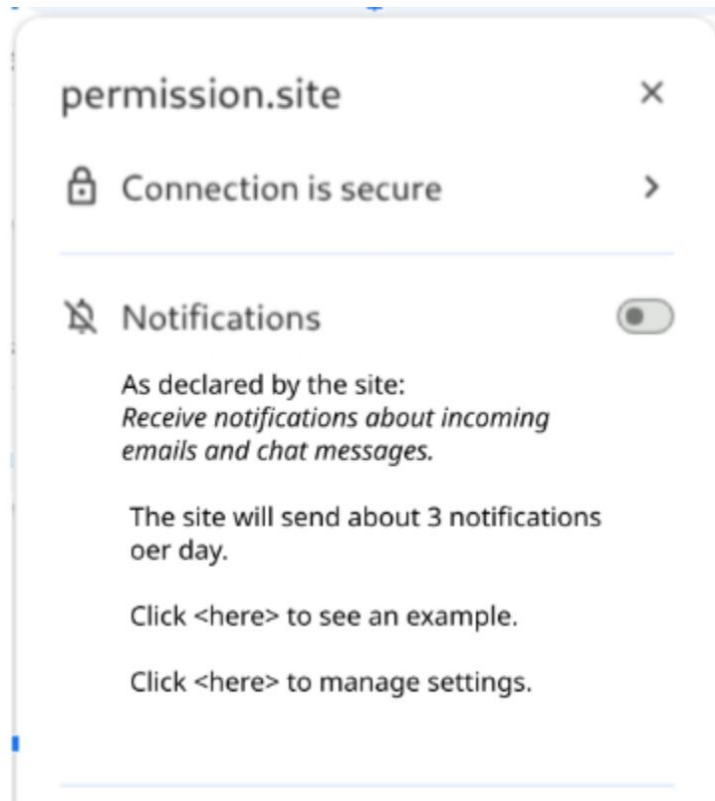
- The browser could surface the control in site settings / page info / some UI.

- The browser could remove the permission flow for notifications.



permission.site     ✕

🔒 Connection is secure    ›

🔕 Notifications

As declared by the site:
*Receive notifications about incoming emails and chat messages.*

The site will send about 3 notifications oer day.

Click <here> to see an example.

Click <here> to manage settings.

# Could be useful for more capabilities?

```
<script type="permissiondeclaration">
{
  "capabilities": [
    {
      "type": "webrtc",
      "purpose": "The page uses peer to peer connections for its video-conferencing functionality."
    },
    {
      "type": "local-network-access",
      "purpose": "The page manages your local awesome printer."
    },
    {
      "type": "persistent storage",
      "purpose": "The page persistently stores all the awesome documents you create on your computer.",
      "expected_usage": "1GB"
    }

    ...

  ],
  "privacy policy": "https://example.com/privacy-policy",
  "terms of service": "https://example.com/terms-of-service"
}
</script>
```

# Why not a <subcribe> element?

- High potential for abuse.

- Doesn't solve annoying in-page pre-prompts.

- Separation of declaration and action?

- Declarations can be useful for other capabilities.