

# Detailed Explanation of Cookie Attributes

## 1. Domain

The Domain attribute determines which domain(s) the cookie is sent to.

If the domain is set to `.example.com`, the cookie will be sent to:

- `example.com`
- `sub.example.com`

If the domain is set to `sub.example.com`, it will only be sent to `sub.example.com`.

## 2. Path

The Path attribute limits where the cookie is sent based on the URL path.

- If the path is `/`, the cookie is sent with all requests to the domain.
- If the path is `/shop`, the cookie is sent only with requests to `/shop` and its subpaths (e.g., `/shop/products`).

## 3. Expires

The Expires attribute sets a specific expiration date and time for the cookie.

- If Expires is set to Tue, 10 Jan 2025 12:00:00 GMT, the cookie will be deleted after that date.
- Session cookies do not have an Expires attribute and are deleted when the browser is closed.

## 4. Size

The Size attribute is the total size of the cookie in bytes.

Maximum cookie size: Most browsers allow cookies to be up to 4096 bytes (4 KB).

## 5. HttpOnly

The HttpOnly attribute prevents access to the cookie via JavaScript, protecting it from cross-site scripting (XSS) attacks.

If a cookie is marked HttpOnly, it cannot be read or modified using `document.cookie`.

## 6. Secure

The Secure attribute ensures the cookie is only sent over secure HTTPS connections.

If a cookie is marked Secure, it will not be sent over HTTP connections.

## 7. SameSite

The SameSite attribute prevents cookies from being sent in cross-site requests, helping prevent CSRF attacks.

- Strict: Cookies are sent only when the request originates from the same site.
- Lax: Cookies are sent with same-site requests and GET requests from external sites (e.g., when following a link).
- None: Cookies are sent with all requests, but the Secure attribute must also be set.

### **8. Partition Key (Site)**

This attribute is used in partitioned cookies for browser isolation.

Partitioned cookies are used to prevent cross-site tracking and are unique to the top-level site they belong to.

### **9. Cross-Site**

Describes whether the cookie can be accessed across different origins or third-party sites.

A cookie without SameSite restrictions is considered cross-site.

### **10. Priority**

The Priority attribute indicates the importance of the cookie for the browser's resource management.

- Low: Least important; might be purged by the browser first.
- Medium (default): Standard priority.
- High: Most important; the browser will try to keep it longer.

## ✅ Key Difference: Internal vs External Requests

Attribute	Internal Requests	External Requests
Domain	✅ Yes	❌ No
Path	✅ Yes	❌ No
SameSite	❌ No	✅ Yes
Cross-Site	❌ No	✅ Yes

## ✅ Summary Conclusion:

- Domain and Path are primarily used for controlling cookies within the same website or across subdomains (internal requests).
- SameSite and Cross-Site are used to control cookies between different websites (external requests).