

Lecture 21 Caching and Proxies



Administration

- Final Projects well underway!
 - Datacenter tour, this Thurs and Fri
 - Sign up at the Ctools-posted URL
 - Directions coming by Wednesday
 - Alpha Release was this Friday @ 9AM
 - Now => Friday @ 6PM
 - Please keep your sites up till 10AM Sat
 - (To allow people to attend the tour)
- Final Exam
 - April 28, 10:30AM-12:30PM, Dow 1010,1018
 - Make-up date: April 23, 1PM-3PM, CSE 4941

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Caching

- Caching is storing a copy of some data closer to the accessor
 - Load reduced on server
 - Response time improved
 - No server-side wait
 - Often, data is physically closer
- We've spoken a bit about it
 - In-browser
 - Akamai
 - Informally, with search engines

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Caching Decisions

- Caching isn't always the right thing
 - Some storage costs
 - Often, high administrative costs
 - Messes with application flow-of-control
 - Ruins logs and auditing/hit-counting
 - Introduces security and privacy issues
 - Tradeoff between performance, freshness

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Caching Is Endemic

- Modern Web has absurd amount of caching in it
 - Browser cache
 - Your org's forward proxy cache
 - Your org's ISP's forward proxy cache
 - Target-server's ISP's or CDN's reverse proxy cache
 - Target-server's server-side cache

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Proxying

- A proxy stands between your browser and the web. Offers:
 - Network policy enforcement
 - Port access
 - Site blocking
 - Data export/import
 - Network access auditing
 - Virus scanning
 - Shared caching
- Regular, or forward, proxy on client-side
- Reverse proxy on server-side
- Must insert record of itself into HTTP header

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