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# Optimizing eCommerce Websites for Large Load Events

## Understand Your Risk

The following are some questions to help you understand your risk.

Given that these patterns are so common, how can you uncover the risk in your own organization associated with these patterns?

### PATTERN 1: POOR CACHE PLAN

**A** Do we have a content delivery network or application cache in front of our website/application?

**B** For every landing page, such as the front page or landing page for a sale, is the page fully cached?

**C** Do we have a cache plan that allows for data that is unchanging to be privately cached for the duration of a session with the end user?

### PATTERN 2: TOO EARLY ALLOCATION

These questions need to be asked of architects who have designed your application

**A** Do we allocate any object that fewer than 50% of users take advantage of on each sign in/arrival to the site?

**B** How do we allocate our defaults for each user?  
Do users leverage all of these defaults for each session?  
Are there some defaults that are leveraged less than half the time that we can move to a just-in-time allocation?

**C** Do we need to re-architect any business functions that leverage default allocations of resources that users are not leveraging more than 50% of the time?

### PATTERN 3: INDEXES

**A** Do we have any examples of table scans when profiling database queries? What can we do to eliminate those items?

**B** Do we have any extremely large tables with indexes covering the entire table? Can we move those to a partitioned index scheme to allow for shorter searches for data?

**C** Do we have any lookup tables, such as zip codes, that are leveraged often where we can pin the tables into memory for very quick access away from the disc?

### PATTERN 4: SESSION TOO LONG

**A** How long are we holding onto each user session before it expires and we recover the session resources? How was this value set?

**B** What is the maximum time between any two top level requests, such as from Login Page to View of product? How does this compare to the session timeout? (Session timeout should be very close to this value.)

**C** What are the number of sessions on the web server that are marked as "Waiting to timeout?" This should be a very small number.

### PATTERN 5: DEVELOPMENT PRACTICES

**A** Do you have defined business requirements for performance? If not, this needs to be addressed.

**B** Does your software meet your business needs or expectations for a single user? Having software meet response time goals for a single user will solve about 80% of performance issues.

Prevent website crashes, abandonment, and other poor performance issues during large load events. Speak to our performance engineers to discuss performance strategies that work for you.