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WebLogic Server Clustering 6

The foundation of high availability in WebLogic Server is the cluster. A WebLogic Server cluster is a group of WebLogic Server instances running simultaneously and working together to provide increased scalability and reliability.

This chapter includes the following topics:

- Overview of WebLogic Server Clusters
- Relationship Between Clusters and Domains
- Relationship Between Coherence and WebLogic Server Clusters
- Benefits of Clustering
- Key Capabilities of Clusters
- Objects That Can Be Clustered
- About Dynamic Clusters
- Roadmap for Clustering in WebLogic Server

Overview of WebLogic Server Clusters

The server instances that constitute a cluster can run on the same machine, or be distributed across multiple machines. A cluster appears to clients to be a single WebLogic Server instance. You can increase a cluster's capacity by adding additional server instances to the cluster on an existing machine, or you can add machines to the cluster to host the incremental server instances. Each server instance in a cluster must run the same version of WebLogic Server.

Relationship Between Clusters and Domains

A cluster is part of a particular WebLogic domain. A domain includes one or more WebLogic Server instances. In a domain with multiple server instances, those servers can be clustered, nonclustered, or a combination of clustered and nonclustered instances.

A domain can include multiple clusters. A domain also contains the application components deployed in the domain, and the resources and services required by those application components and the server instances in the domain. Examples of the resources and services used by applications and server instances include machine definitions, optional network channels, connectors, and startup classes.

You can use a variety of criteria for organizing WebLogic Server instances into domains. For instance, you might choose to allocate resources to multiple domains based on logical divisions of the hosted application, geographical considerations, or the number or complexity of the resources under management. For additional information about domains see Understanding Oracle WebLogic Server Domains in *Understanding Domain Configuration for Oracle WebLogic Server*.