Chef Automation : Whether you have five or five thousand servers, Chef lets you manage them all by turning infrastructure into code. Infrastructure described as code is flexible, versionable, human-readable, and testable. Whether your infrastructure is in the cloud, on-premises or in a hybrid environment, you can easily and quickly adapt to your business's changing needs with Chef.

The [**Chef DK**](https://docs.chef.io/release/devkit/) gives you the tools you need to develop and test your infrastructure automation code locally from your workstation, before deploying changes into production. For example, the [**Test Kitchen**](https://docs.chef.io/kitchen.html) tool lets you run tests in an isolated environment. Chef DK also includes **[InSpec](https://docs.chef.io/inspec.html" \t "_blank)**, a powerful language for writing infrastructure tests.

**Chef Server**

The [**Chef Server**](https://docs.chef.io/server_components.html) acts as a central repository for cookbooks as well as for information about every [**node**](https://docs.chef.io/nodes.html) it manages. Chef [**cookbooks**](https://docs.chef.io/cookbooks.html) contain code that describes the desired state of your infrastructure.

### Chef Client

A [**node**](https://docs.chef.io/nodes.html) is any physical or virtual machine in your network that is managed by the Chef server. The [**Chef client**](https://docs.chef.io/chef_client.html) runs on each node and securely communicates with the Chef server to get the latest configuration instructions. The Chef client uses the instructions to bring the node to its desired state.

## Benefits of Chef

### Accelerate Cloud Adoption

As you move your applications to the cloud, Chef makes your adoption path not just smooth, but fast. Migrate your workloads quickly, consistently, and at a pace that suits your needs.

### Manage Both Data Center and Cloud Environments

Chef lets you manage all your environments. Manage Windows, Linux, AIX, and Solaris servers, whether in the cloud or on premises.

### Manage Multiple Cloud Environments

Take control of all your cloud environments. Chef is cloud agnostic, which means you’re free to pick the cloud providers that meet your requirements, based on features and cost.

### Maintain High Availability

Keep the Chef Server API available even in case of partial network or hardware failure. The Chef server can operate in a high availability configuration that provides automated load balancing and failover for stateful components in the system architecture.