



Cisco UCS™ with Intel® Xeon® Processors

Benefits

- Gain data protection with high-availability; backup, recovery, and archive (BURA); and disaster-recovery solutions.
- Implement the 3-2-1 backup rule with our solutions.
- Our solutions are easy to deploy and maintain.
- Cisco® reference architectures and Cisco Validated Designs reduce costs and risk.
- Our partnerships with industry-leading software vendors help avoid lock-in.
- Model-based management increases operational efficiency and reduces total cost of ownership (TCO).

Cisco Data Protection Solutions

Cisco® data protection solutions are insurance for your business. They reduce risk by storing your business data, and they help ensure that it is safeguarded and readily available when you need it most. There is a price for data integrity and availability, but the costs of loss and lack of availability are far greater.

We have a variety of data protection solutions certified for compatibility on the Cisco Unified Computing System™ (Cisco UCS®) platform powered by Intel® Xeon® processors. They range from Cisco UCS C-Series Rack Servers to high-capacity Cisco UCS S-Series Storage Servers. Our solutions provide data protection across all your data center infrastructure: bare-metal, converged, hyperconverged, and software-defined storage (Figure 1).

Our approach to data protection solutions is different. We combine software from industry-leading data protection software partners with Cisco UCS as a foundation. This approach creates a better solution that can give you more value than what you may have today.

What Is Data Protection?

Data protection uses one or more techniques to help ensure data availability and integrity in the event of a failure. The more critical the data is to your business, the more important it is to protect that data. But not all data has equal importance. To quantify data importance, the industry uses the terms “recovery time objective (RTO)” and “recovery point objective (RPO).” As part of the rollout plan for all applications, you should be defining the RTO and RPO for each application and its data. The RTO is the length of time that you can run your business without access to your data and not incur significant losses. In other words, how soon do you need your data back in the event of a failure? The RPO is the maximum time period over which you can tolerate data loss or corruption. Knowing your RTO and RPO will help you incorporate the right level of data protection for your applications from the beginning.

Levels of Data Protection

Three main approaches to data protection are used: high-availability; backup, recovery, and archive (BURA); and disaster-recovery solutions.

- **High availability:** High-availability features in your infrastructure are the first level of data protection. If your infrastructure has no single point of failure, you are less likely to lose application availability or data.
- **Backup, recovery, and archive:** BURA software is the next level of data protection and data management. Use the 3-2-1 backup rule:

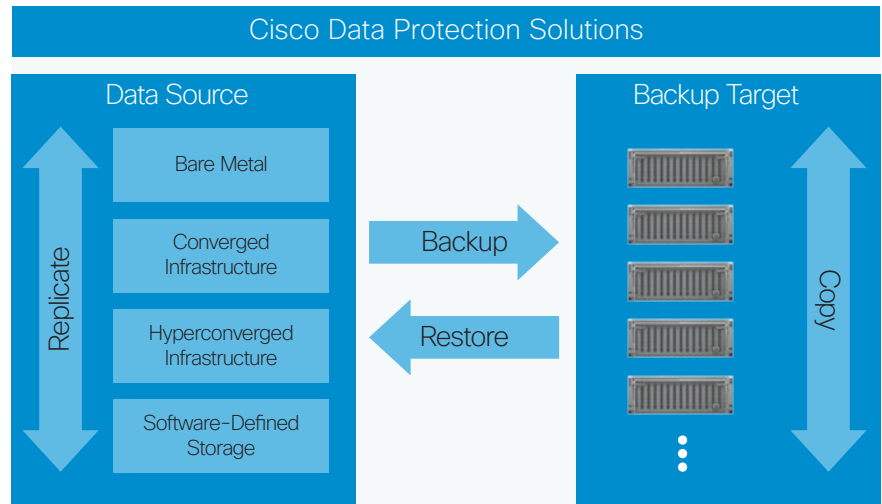


Figure 1 Cisco Data Protection Solutions with Cisco UCS and Intel Xeon Processors Span All Our Data Center Infrastructure Solution Areas

three copies of business-critical data, two different formats, and one off-site or remote backup copy.

- **Disaster recovery:** Disaster recovery provides the protection in implied the last point of the 3-2-1 backup rule. If a disaster occurs—for instance, a fire, hurricane, tornado, or earthquake—you have a copy of your entire application stack, including software, data, and infrastructure, ready to take over application operations in a matter of minutes from another location.

Cisco Data Protection Solutions

Our solutions span the spectrum of approaches and give you RTO and RPO choices appropriate for your applications. Our infrastructure is designed with no single point of failure as the first line of defense. Beyond that, we work with our partners to provide BURA, disaster-recovery, and backup-as-a-service (BaaS) cloud solutions. These solutions enable you to use a consistent operational strategy to manage your entire application infrastructure (server, network, and storage resources) as well as your data protection environment. They deliver:

- **Simplicity with reduced complexity:** You can get capacity-based bundles mapped to reference architectures and Cisco Validated Designs for fast and easy deployment.
- **Reduced risk with prevalidated reference architectures and Cisco Validated Designs:** We have already done the hard work of configuration and testing to create a solution with industry best practices built in. All you have to do is follow the recipe for success.
- **No lock-in:** We work with industry leaders to provide you with a choice of solutions.
- **Operational efficiency:** We offer model-based management of your computing, networking, and storage resources.

For More Information

Discover how our products can help you:

- cisco.com/go/ucs
- cisco.com/go/storage

Explore the solutions we offer:

- cisco.com/go/dataprotection