HITACHI
Inspire the Next

VIRTUALIZATION ECONOMICS FLEXIBILITY INNOVATE RELIABLE
N GLOBAL CHANGE INTELLIGENT TECHNOLOGY SERVICES VALU
Y SOCIAL INFRASTRUCTURE INTEGRATE ANALYZE DISCOVER CO

SOLUTION PROFILE

Remote Office Data Protection: Have It Your Way!

Right-Size Your Approach for Each Office

Backup and recovery of remote and branch office data has been a vexing problem for IT organizations for years. There are many choices available for how to solve this challenge, but none of them seem to fit every situation. Most solution vendors, however, offer only one or two options for protecting distributed data, expecting you to force-fit their solution into your environment.

As we do in the data center, Hitachi Data Systems offers a range of options to fit every remote office data protection need. We help you pick the right solution for each office, and even combining them where it makes sense.

Why Is Remote Office Data Protection Important?

The people in your remote and branch offices (ROBOs) are on the front lines of your business. They have the most direct interaction with your customers. They are creating the real-time information, such as transaction records, patient records, research data and much more, that your business relies on to function and succeed. Losing this information due to human error, a device failure or even a disaster, could cause substantial pain for your organization.

Additionally, it may be important to centrally collect a copy of remote office data for a variety of secondary operations. You might need a copy of transactions for testing new applications. Or, a copy might be required for auditors or to support legal discovery. Data collected in remote offices may also be critical for big data and analytics processes, to provide a full set of information from which to make informed business decisions.

Why Is Remote Office Data Protection So Challenging?

Unified Recovery Management

WATCH

Just as in the corporate offices and in the data center, there are different types of applications and data created and stored in remote offices. However, unlike the core sites, remote offices don’t usually have dedicated technical staff to help manage data storage and protection. In fact, data management is so far from the mission of remote staff that they don’t even want to think about it, much less do it.

At best, you might have someone, maybe an office manager, who is tasked with starting a backup job before he or she heads home each night. That individual then sends a copy of the backup data to an off-site facility, or your data center, for disaster recovery and/or archiving. Or, you rely on a local services company to handle these tasks.

Even more challenging is the home office worker. According to GlobalWorkplaceAnalytics.com, 50% of the U.S. workforce holds a job that is compatible with at least partial telework, and approximately 20-25% of the workforce teleworks with some frequency. These statistics indicate that teleworking is an important segment of the data management spectrum and requires the attention of those tasked with data protection, recovery and retention.

Why Doesn’t One Solution Work Everywhere?

Frankly, it’s because there are different sizes and types of remote offices with different data characteristics:

- Small offices of 1 to 10 employees, including home offices and mobile employees, do not have a local IT infrastructure beyond user workstations and a network connection.
- Medium-size offices may have 10 to 50 employees, with some shared infrastructure, such as an application server, a file server and maybe an email server.
- Larger offices with 50 or more staff members would have a larger infrastructure and probably one or two local staff, who handle IT support as a part of the job.

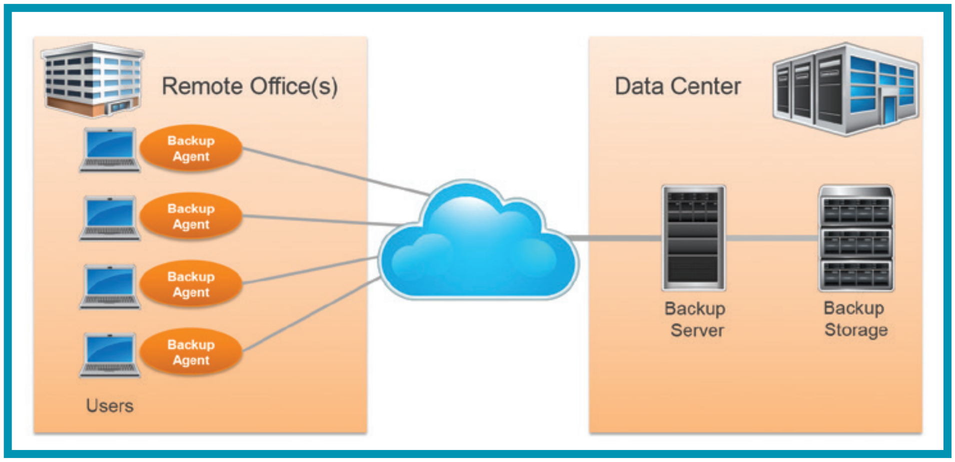
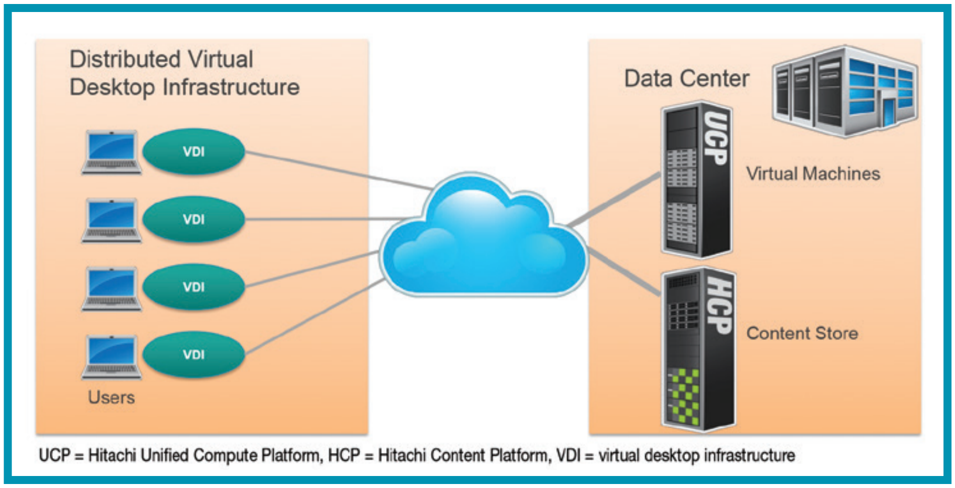


Figure 1. Data Protection for Small Offices



UCP = Hitachi Unified Compute Platform, HCP = Hitachi Content Platform, VDI = virtual desktop infrastructure

Figure 2. Data Protection in VDI Environments

- Regional offices, with a mixture of functions that focus both locally and across a geography, could have needs that are blend of the above.

A single approach to solve all these situations is most likely to be too expensive for the smaller offices and not effective for the larger ones.

ROBO Cloud Solution Profile

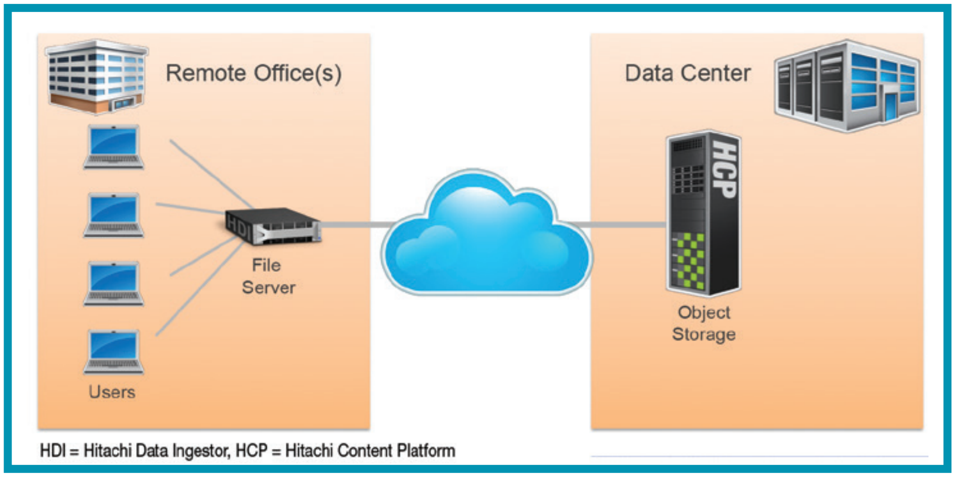
READ

Hitachi Data Systems and our partners will help you choose the right technology, or set of technologies, for each of your ROBOs, and tie it all together to work with your core data protection infrastructure. Right-sizing the solution will also right-size the cost, effectiveness and return on investment.

Examples of Possible Remote Office Data Protection Solutions

For **small offices** (see Figure 1) with no shared infrastructure, the preferred approach is to install a backup agent onto each employee’s desktop or laptop system. For example, if you are using Hitachi Data Protection Suite (HDPS) in your data center, it can provide backup and recovery for the users that is:

- Centrally managed and fully automated.
- Deployed and installed remotely.
- Integrated with data center backup, disaster recovery and archiving.



HDI = Hitachi Data Ingestor, HCP = Hitachi Content Platform

Figure 3. Data Protection for Medium-Size Offices

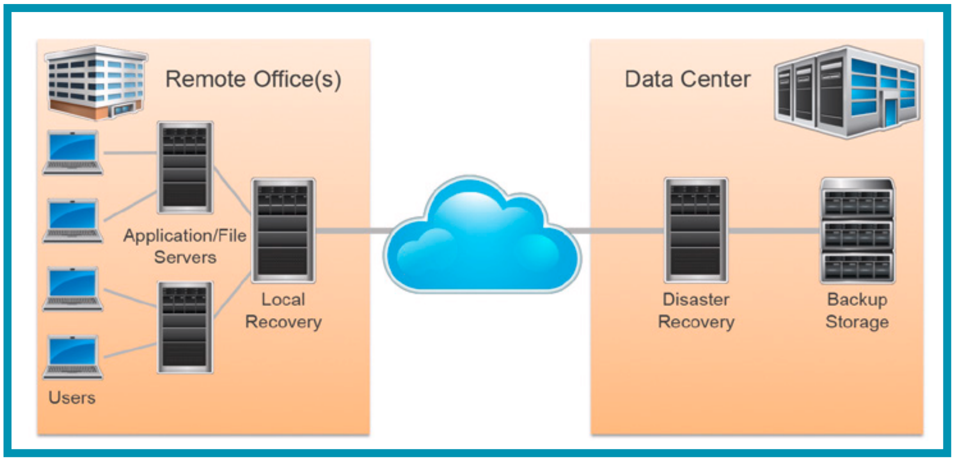


Figure 4. Data Protection for Large Offices

A recent trend for the smallest offices, including the home office, is to use virtual desktop infrastructure (VDI), replacing the traditional client-server model. This technology approach is very similar to the "dumb" terminal of the 1960s and 1970s, when all applications and data were served from a central mainframe or minicomputer. The terminal was simply a screen, a keyboard and a connection to the computer.

As shown in Figure 2, the mainframe is replaced by a centralized virtual machine (VM) infrastructure and a centralized data store. The VM stores and easily protects the "stateless" user operating systems and applications and serves them to the VDI endpoint. The data store maintains, manages and serves the VDI machine state information and the user's data.

In the Hitachi Data Systems solution for VDI, the user data is stored in Hitachi Content Platform (HCP) object storage. HCP includes sophisticated self-protecting capabilities, eliminating the need for traditional backup. Likewise, using stateless VMs in a centralized Hitachi Unified Compute Platform (UCP) requires only a copy of the VM to be stored off-site for disaster recovery capabilities.

For **medium-size offices** (see Figure 3), an excellent option is to use a combination of Hitachi Data Ingestor (HDI) in the remote office and Hitachi Content Platform in the data center. HDI is a remote office NAS file server. Its data is automatically copied to the central HCP system. No backup is required in the remote office. HCP is a highly scalable object storage platform that can centrally store and manage all ROBO data as well as other tiered data. It is self-protected storage, so no backup is needed here, either.

Larger offices (see Figure 4) can host their own data protection infrastructure. However, you will still want to centrally manage this environment and have it run automatically, so that it is transparent and not a burden to your remote staff. Hitachi Data Instance Director (HDID) provides this and is fully policy-based to allow different levels of protection for different data sets. HDID is a unified copy data management solution that integrates backup, continuous data protection, snapshots, replication and archive (tiering to HCP in the data center) in a single easy-to-use interface. Since it performs block-level, incremental-forever data capture, it has little or no impact on applications.

For **regional offices** (see Figure 5) that may have a blend of geographical and local responsibilities, a blended solution could be the most practical. For example, you would use HDID to protect application data, such as Microsoft® SQL Server® or Exchange, and Oracle or SAP HANA databases, orchestrating application-consistent storage-based snapshot and clones. File-based user data could also be protected using HDID's block-level continuous data protection (CDP), plus asynchronous replication to a central HDID server for disaster recovery. Also use HDI and HCP for file data and Hitachi Content Platform Anywhere for mobile users.

Summary

Everything about information technology is complicated, especially at enterprise scale. Even though a remote office may seem like a more simple entity than a huge data center, protecting the data in that office is no less important. Choosing the right solution is not a simple decision. Each office has different characteristics, including applications, data sets, infrastructure and network connectivity, number and function of employees, not to mention the technical skills of the staff in that office.

Given the importance of the data being created and managed in these distributed

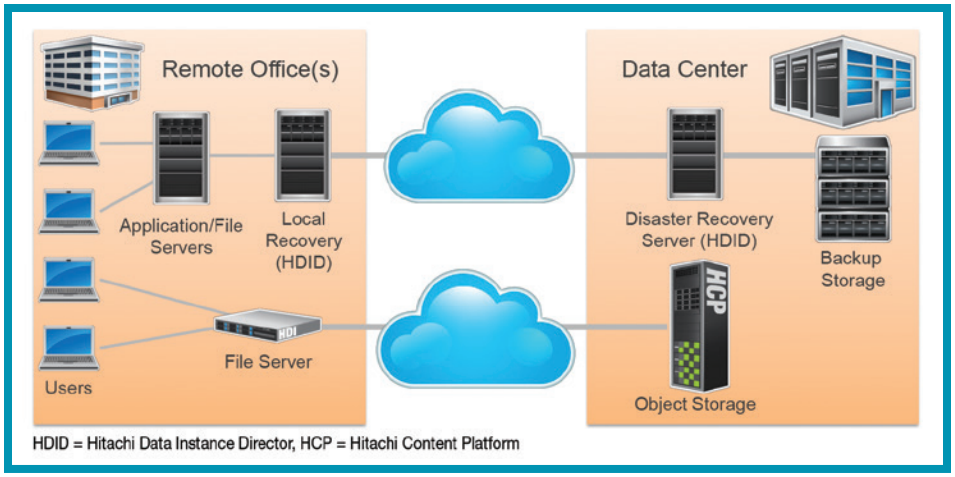


Figure 5. Data Protection for Regional Offices

locations, it is incumbent upon the central IT office to ensure the remote data is protected, managed and retained in a manner that is consistent with corporate and regulatory policies. Expecting the employees in these offices to take time from their primary responsibilities to perform data protection processes is naïve at best. A centrally managed and monitored approach is what's really needed, but with a range of technology options that can be adapted to the local requirements.

The data protection experts at Hitachi Data Systems can help you define, design and implement a solution, or set of solutions, to this complex problem. Together, we'll deploy the technologies that are just right for your organization, meeting the data protection and recovery service level requirements of each office.

To begin this conversation, please contact DP-Sales@HDS.com.

Hitachi Data Systems

Corporate Headquarters
2845 Lafayette Street
Santa Clara, CA 95050-2639 USA
www.HDS.com **community.HDS.com**

Regional Contact Information
Americas: +1 866 374 5822 or info@hds.com
Europe, Middle East and Africa: +44 (0) 1753 618000 or info.emea@hds.com
Asia Pacific: +852 3189 7900 or hds.marketing.apac@hds.com