

IBM Tivoli Continuous Data Protection for Files





Why didn't we backup user-machines?

- Servers held the data
- Workstations were 100% tethered
- People worked in the office
- No practical solution
- Fewer laptops
- Data less valuable





Why Backup end-points now?

- 93% of corporate data now lives on “the edge”.
- Data is now de-centralized.
- Corporate “time” and “property” lost.
- They house our work-critical documents.
- They house our personal pictures, email, and media collections.
- Personal use digital-life lost.
- Most computers are now laptops.
- More complex compliance regulations and standards.
- End-user data value is increasing (business *and* consumer)





Every computer...

- Runs anti-virus...
- Runs a fire-wall...
- Has our work-critical documents...
- Has our life-critical pictures, email, media.

But virtually none run backup...

- Less than 1% backup.
- More than 1 billion PC's alive.
- More than 170 million new each year.

93% of corporate data
now lives on "the edge"



What is Tivoli CDP for Files?

Purpose-built laptop/desktop backup...from single user to 1,000's of business machines.

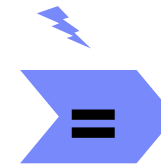
Replication

- To-Disk duplication
- Lightening fast
- Real-time for high-importance files
- Tolerant of transient networks
- Multiple targets



Traditional Backup

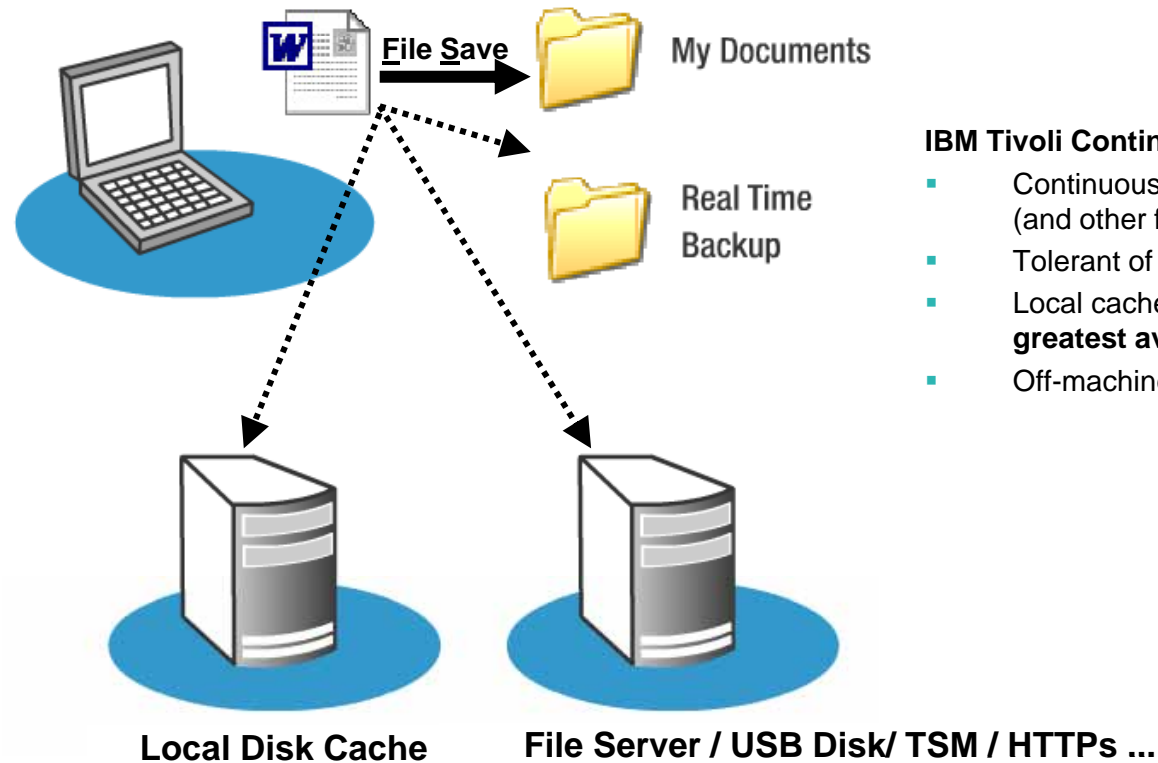
- Versioning of files
- Point-in-time restore
- Central administration
- Archiving (vaulting)
- Retention
- Highly scalable



The new direction in data protection is: Real-Time, To-Disk, Native Format, Simplified Management.

¹ 22 patents filed

IBM Tivoli Continuous Data Protection for Files



IBM Tivoli Continuous Data Protection for Files

- Continuously protects important files without doing a thing (and other files on a schedule).
- Tolerant of network “spottiness”.
- Local cache for highest performance, least impact, and **greatest availability**.
- Off-machine for protection against, well, life.

**Transparent, always-on, airbag-like protection.
Whether ‘connected’ or not.**

Tivoli CDP is Unique!

1. CDP is “**real-time**” and always protecting you.
2. CDP is a **client-only** solution, *focusing* on laptops.
3. CDP stores data **on-machine** and off-machine; 2 copies!
4. CDP is **tolerant** of network issues; waits/retries, never fails!
5. CDP special **email** support; changed-blocks only.
6. CDP has **widest target** device support:
USB Disk, Flash, Server, NAS, SAN, TSM, HTTPS, other
7. CDP is **affordable!** \$35 per protected computer, nothing more.
8. CDP is **manageable**, simply!
Central administration, Locked configurations, etc

Simple, Transparent, Powerful.



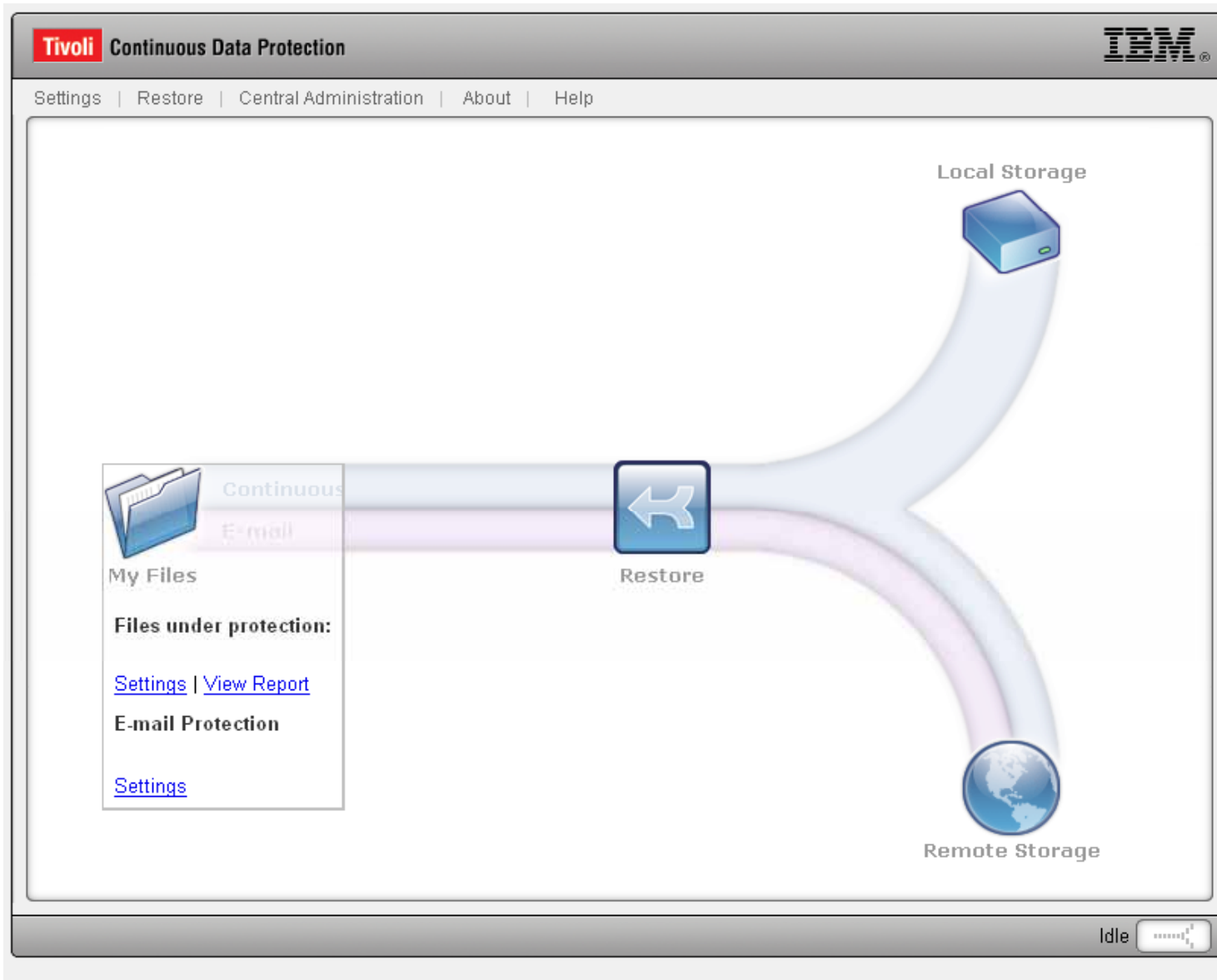
What's new in Tivoli CDP for Files 3.1

- 100% re-done GUI
- Configuration Wizard
- Restore Wizard
- Versioning of e-mail files (space efficient)
- MSI installation package
- Microsoft Vista operating system support



Quick Walk through





Entrance screen

- Clean/simple look
- Live Graphics
- Mouse-overs

The screenshot shows the 'General' settings window for IBM Tivoli Continuous Data Protection. The window has a title bar with the Tivoli logo and 'Continuous Data Protection' text. Below the title bar is a 'Help' link. On the left side, there is a vertical navigation pane with buttons for 'General', 'Files To Protect', 'E-mail Protection', 'Remote Storage', and 'Advanced'. The 'General' tab is selected and active. The main content area of the 'General' tab contains a blue cube icon and a descriptive text: 'Specify on which local disk you want your backups to be stored, how many versions of backups to keep, and the amount of disk space you want to use to store the backups.' Below this text are four configuration fields: 'Back up to:' with a dropdown menu showing 'C:\'; 'How many versions to keep:' with a text input field containing '20'; 'Maximum space for backups:' with a text input field containing '500' and a dropdown menu showing 'MB'; and 'Continuous protection level:' with a dropdown menu showing 'Local and remote storage'. At the bottom of the window, there are three buttons: 'OK', 'Apply', and 'Cancel'.

Tivoli Continuous Data Protection

Help

General

Files To Protect

E-mail Protection

Remote Storage

Advanced

General

Specify on which local disk you want your backups to be stored, how many versions of backups to keep, and the amount of disk space you want to use to store the backups.

Back up to:
C:\

How many versions to keep:
20

Maximum space for backups:
500 MB

Continuous protection level:
Local and remote storage

OK Apply Cancel

Settings: General

- Configure # versions
- Configure local cache size

Tivoli Continuous Data Protection **IBM**

Help

General

Files To Protect

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Files To Protect

The folders and application data that are continuously protected are listed. Click Details to change what is protected. You can also initiate a backup with the new settings.

Folders and Files

\My Documents\, *.doc, *.xls, *.ppt, *.123 [Details](#)

Applications

No applications [Details](#)

Folder and Files Settings

Add a folder or file for continuous protection, or exclude it from protection. You can also remove a folder or file from the list. Items that are excluded will not be protected.

Folders and Files

Include | Exclude | Remove

Name	Type
\My Documents\	Include
*.doc	Include
*.xls	Include
*.ppt	Include
*.123	Include
RealTimeBackup	Exclude
\Program Files	Exclude
\System32\	Exclude
~	Exclude
*.tmp	Exclude

OK Cancel

Settings: Files

- Specify which files
- By name or location or application
- Modern explorer-like selection
- Normal include/exclude

Tivoli Continuous Data Protection

Help

General

Files To Protect

E-mail Protection

Remote Storage

Advanced

Remote Storage

Specify a remote location, such as a file server, to store your backups. Specify how many backup versions to maintain, and the space available for the backups. You can also encrypt your data for security purposes and compress it to save space on your remote storage device.

Back up to:
 ▼

Location:
 Browse

How many versions to keep: Maximum space for backups:
 ▼

Advanced Settings

Encrypt backups

Compress backups

Use sub-file copy to send only changed portions of a file to remote storage to reduce network traffic. The changed portions are saved to a separate file on remote storage.

Use sub-file copy for files larger than:
 ▼

Settings: Remote

- Location
- Versions/space
- Encrypt/compress
- Other; plus other panels for advanced sets.

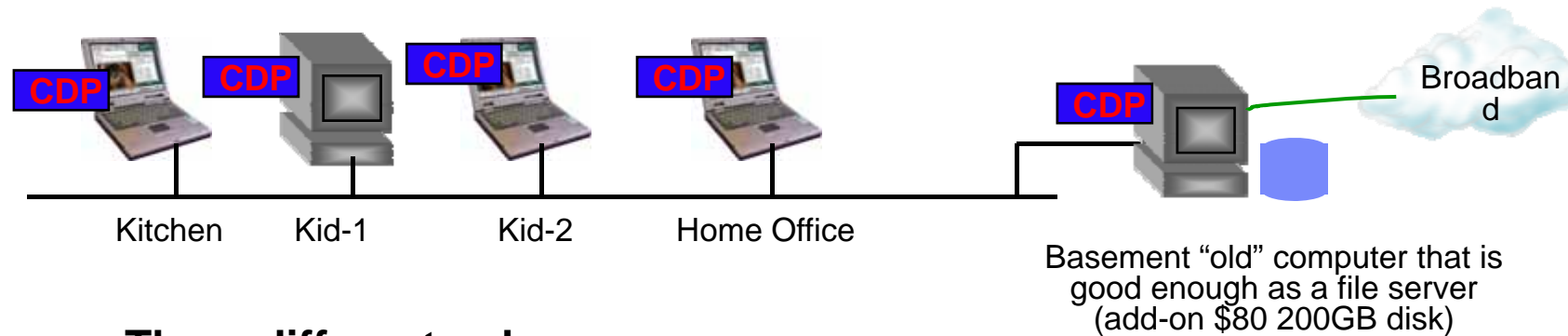
Use Case 1: Lone User



Three different sub-use-cases:

- Simplest: No desire for off-machine protection; simply enjoys the pool-based versioned replication to the local area of his most important files. This user installs-and-goes (doesn't change any defaults).
- USB/Firewire: This user wants to periodically have his data automatically exported to a removable drive such as a USB or Firewire drive. Once in a while, he'll hook-up this external drive, but typically it is not attached. This user will specify "D:\\" (or whatever) as the CDP "remote target". CDP will patiently wait for the existence of the drive and when connected it will "catch up".
- ISP account (or broadband provider account): This user would like to exploit the storage space provided by an ISP. He'll configure the CDP "remote target" as [\\pokgsa.ibm.com\stakutis](http://pokgsa.ibm.com/stakutis) (for example). This user may be more diligent in their configuration of the "exclude" list (due to longer distance network and more limited or costly target space).

Use Case 2: Homeowner & SOHO

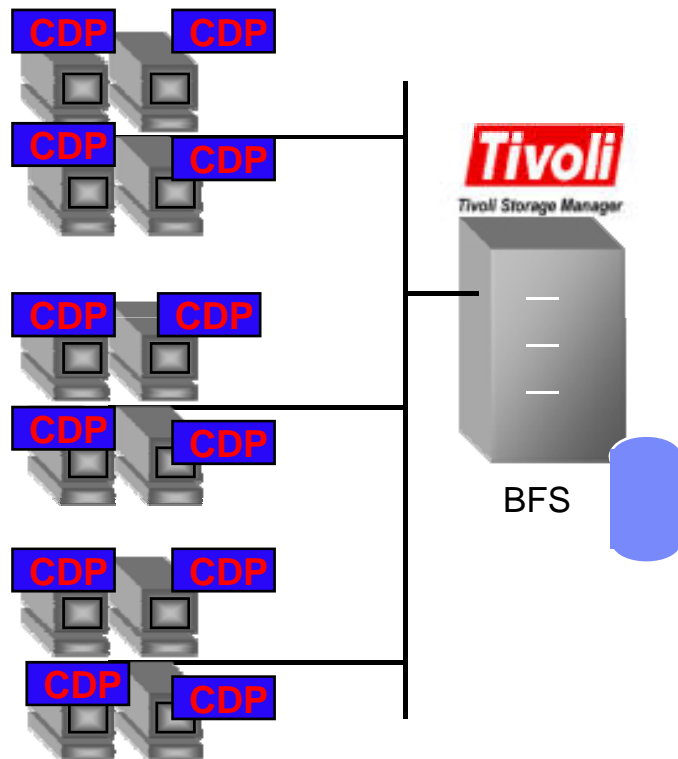


Three different sub-use-cases:

- **Simplest:** Various household computers are configured to point to a re-deployed old computer as the remote target for CDP (inexpensively updated with a USB external hard disk), a cheap NAS from Staples/OfficeMax. Local real-time protection plus off-computer protection for both high-priority files and everything else.
- **Vaulting:** As above, but this user also runs CDP *on* the target computer and activates the 'vaulting' feature. He chooses to lock-down his home digital pictures directory and maybe any MP3's that get replicated to the box.
- **ISP :** As above, plus configures the "basement computer" to also replicate some set of files (e.g. *.doc) to his Internet Service provider which gets his critical files out of the house.

Use Case 3: Enterprise

1,000's of desktop and laptop clients; TSM shop with TSM skills

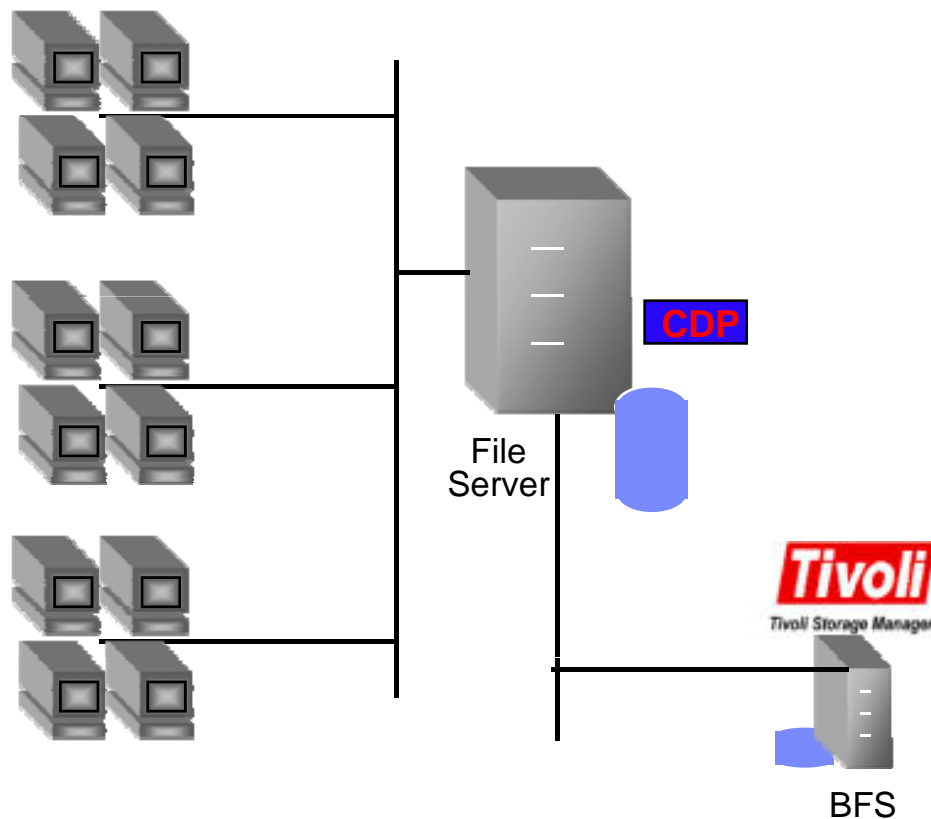


Three different sub-use-cases:

- Simplest: Customer deploys large-scale file server as the Backup File Server (possibly several). Customer is well-skilled with TSM and chooses to backup the BFS using TSM.
- TSM Centric: Users load both CDP and TSM Client. CDP does its normal high priority continuous protection to the local cache, and CDP is also configured for hourly backup into TSM of those same files (and patient if the network is not available).
- File Server: Customer loads CDP on their important file servers (as opposed to the workstation endpoints). Users go about their normal operation. CDP makes real-time local cache copies of high-importance changed files and can also be configured to replicate to another target (remote disk, another file server, offsite-server, etc).

Use Case 4: File Server

Any type of shop; 10's-1,000 clients;



Several sub-use-cases:

- Simplest: Users use their file server naturally (no changes). Add CDP to the file server. Activate real-time CDP to local LUN for high-valued files. Continue to backup the file server using existing tools and approaches (the main new value being CDP of high-valued files).
- Medium: As above, but also have the file server replicate to a backup-file-server (BFS), most likely on a scheduled (hourly) basis and then back up the BFS using traditional tools. Likely the BFS will be a target of many file servers in the shop.