

FLASH for i

GAIN AGILITY

No more impact on IBM i production

for backups, SAVE21, recovery copies, analytics, data extraction, test environments generation

Already 600+ installed systems

DON'T STOP PRODUCTION FOR BACKUP TASKS

Exhaustive, 100% reliable, and more frequent backups compatible with continuous access to Prod

- Instant daily backups (including Save 21).
- Use of existing software (including BRMS).
- Prod restrictions reduced to less than 2 minutes (in 90% of cases).
- Low disk capacity use*.



DATA COPIES MADE BEFORE AND AFTER CRITICAL BATCHES

System snapshots for more agile debugging (or rollbacks)

- Scheduled N times per day or on demand.
- Possibility of debugging on clones of the initial clones.

YOUR TEST OR ACCEPTANCE DATA UPDATED AT A GLANCE

Create multiple environments, with up-to-date and secure data, by a simple IBM i command

- Test, Qualification, Pre-Prod,… partition's data updated on the fly.
- 100% Prod-independent, sanctuarized (DevOps).
- Actual data from Prod, refreshed in just a few minutes.
- Anonymization of this data made simple (RGPD).

A PROD RELIEVED OF HEAVY REQUESTS

Run your SQL and Queries from the 'clone' partition

- Or feed your datawarehouse from this partition.
- Advantage: data is frozen at cloning T time.

FAST RESTART AFTER DATA CORRUPTION (malware, bug, mistake or false manipulation)

N snapshots of your disks, captured throughout the day, accessible for inspection and reloading of safe, pre-incident data

- Several copies per day of your Prod* disks: the copies will be more recent than your cartridge backups and potentially unaltered, unlike replicated copies with HA solutions ...
- Restored or 'reloaded' in just a few minutes.

THE STRENGTHS OF FLASH for i

- Controls your external storage array's disk cloning functionality
- Launched from the IBM i PROD partition
- Clones use very little disk space
- "Plug & Play» product: quick and easy to install
- Easy to use: optimal automation
- Robust and stable: 600+ installations worldwide
- Feature-rich: 8 years' experience with ~3 releases per year to keep pace with customer needs and technological developments
- Users-praised hotline
- 2 modes: Perpetual licenses or Subscription

* In the greatest number of use cases, cloned disks only require 5 to 15% of the original disk space.

M81 IBM i EDITOR

Introducing M81: Software house (ISV) specializing in IBM i. It offers 2 solutions: Flash for i: see above & **Control for i:** 180 IBM i Plug & Play controls added to your company's monitoring tool. 600+ companies rely on M81 products installed on 1000+ LPARs in 23 countries (Americas & Europe).

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V2024_04



FLASH for i

HOW IT WORKS

- **Flash for i uses the 'Flashcopy/Snapshot' features of your external storage to clone IBM i disks configured on it.**
- **Flash for i is installed only in the 'Source' partition (usually the PROD).**
- **At the best suitable time for production work, from a simple IBM i command, Flash for i will perform all the necessary cloning operations:**
  - Ask the OS to copy active data in memory to external disks, with or without freezing data access; this operation takes only between a few seconds and one minute!
  - Connect to the external storage array to trigger a «snapshot» 1 of all IBM i production disks; this operation is almost instantaneous.
  - Connect to the HMC to start what is known as the CLONE partition.
  - All these operations are carried out very quickly (between 30 seconds and 2 minutes).
  - PROD partition continues to operate completely normally.
  - The CLONE partition 2 Starts autonomously and Flash for i takes control of it.
  - During its IPL, Flash for i will make this CLONE partition « inoffensive» to ensure that no items from the PROD automatically start up: IP address, subsystems and user jobs, internal job scheduler, etc.
  - A few minutes later, your production data are available on a new partition (called CLONE), comple¬tely independent and isolated from the PROD partition, and can be used for backups, tests, queries, 3 ...
- **In other cases, this 'Clone' partition will only be started up in an extreme situation:**

  Example 1: a major batch program crashes on PROD. The initial data are still available on the last clone performed just before the batch was launched (for re-execution or debugging purposes...).

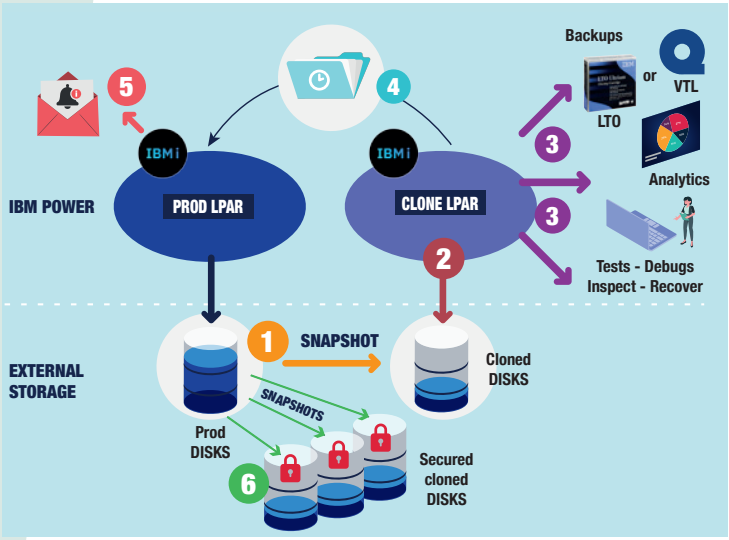
  Example 2: tables are deleted on PROD through a careless mistake or corruption/encryption by a hacker or malware. In this way, healthy data can be recovered from the cloned partition(s).

OTHER FEATURES

- Each step of the cloning process is logged and the history is transferred to the PROD partition on the way, as well as the system logs and the joblog of the backup job 4. If a backup has been performed on CLONE using BRMS, the BRMS data is repatriated to the PROD.
- Flash for i provides administrators with easy-to-use commands for viewing everything that has happened in the CLONE partition (internal and system logs, joblogs and statistics) from the PROD. These can be easily consulted and analyzed.
- Naturally, all operations can be monitored in real time from the PROD partition, using a variety of solutions (software option supplied with Flash for i 5, in-house development, Nagios or other tools, etc.).
- The operations described above and below are fully configurable and automated, driven by IBM i commands.
- Connections between the Production partition (where Flash for i resides) and the external storage array and console are secure.
- **NB:** the clone partition, clone disks and zoning must be configured for once and for all prior to installing Flash for i.

SPECIFIC FEATURES ACCORDING TO USE CASE

- **Backups** Several solutions supported: native IBM i commands, Save 21, BRMS, more to come. Media-independent: LTO driver, library, VTL, ...
- **Copies before critical batch** to avoid polluting the 'pre-batch' clone during debugging operations, you can work on the clone of this clone (cascading).
- **Queries, extractions** These run on data frozen at cloning time T.
- **Data refresh and Test environment** As often as necessary, a clone of the PROD is generated and automatically reconfigured (Name, IP, NetServer, RDBDIRE, …) with Flash for i Reconfiguration module as an UAT or Preprod partition.
- **Rescue infrastructure** if the PROD is replicated to a backup site (mirroring or software replication), FlashCopy/Snapshot can be performed on the remote disk array.
- **Recovery** Clones can be made with maximal security 6 using the «IBM SafeGuarded Copy» function on IBM external storage or «Secure» on VMAX and PowerMax external storage. A command allows the last (or right) clone disks to be assigned to a 'Recovery' partition.
- **DRP** DRP automation functions are available in case of Remote Mirroring.
- **Centralized management (optional)** In a network including several partitions, Flash for I can be managed (definitions and monitoring) from a single "primary" partition.
- **For Cloud Providers** The 'Proxy" module allows to isolate customer partitions from shared infrastructures (storage and HMC).



TECHNICAL INFO

- IBM i V7R3 and higher (V7R1 and V7R2: please consult us)
- HMC or Novalink console
- External storage: IBM (Storwize, SVC, FlashSystem, DS8000), EMC (Vmax, PowerMax, Unity), PureStorage, ...
- iASP not required but fully supported.
- Space consumed by clone disks: in most cases, 5 to 15% of the original disk space.

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