

Deuxièmes rencontres HPSS France

5 et 6 avril 2018

2018-Q2

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Messages from Houston

Messages from Houston

- ▶ HUF 2017 reviews
- ▶ Since the 2017 HUF, we have **updated release plans** for 7.5.2. It was originally planned for March but we've re-scoped the release and moved its availability to May. We added a 7.5.3 which will feature ordered migration and select bug fixes for a November scheduled release. We have also begun working on 7.6.1 with a candidate set of changes identified
- ▶ Of course, all future release plans are subject to change. The Executive Committee is currently discussing plans with the intent to conduct a **call with the HPSS community at some point in late Spring** as Dick Watson discussed at the HUF
- ▶ Speaking of Dick, he retired at the end of last year. John Noe is the EC co-chair now, at least until October when he's planning to retire
- ▶ We are always looking for **good stories, news, and announcements** for the HPSS collaboration website so please encourage sites to contact us whenever they have anything, anything at all

HUF 2017 review

Topic	Reviewer	Date
751 Upgrade Planning	Jon Procknow	January 17, 2018
Updates for 752	Michael Meseke	January 31, 2018
752 Logging	Michael Meseke	February 14, 2018
DB2 History	Dave Boomer	March 21, 2018
TreeFrog (a new HPSS interface)	Alan Giddens	April 4 2018
Burning Issues	Jon Procknow	TBS 2018

- ▶ Dossier contenant les présentations et les enregistrements
 - <https://ibm.box.com/s/852ej034ib8zs2n62fz1avgiwe1tbquq>
- ▶ Egalement disponible sur le HPSS Admin Wiki

751 Upgrade Planning

- ▶ HPSS 7.5.1 New Features
 - Db2 Partitioning
 - Storage Object ID (SOID) Improvements
 - End-to-End Data Integrity (E2EDI)
 - Tape Ordered Recall (TOR)
 - Quaid
- ▶ HPSS 7.5.1 Feature Overview
 - Improved Segment Unlink Performance
 - Batch Resource Create/Delete Improvements
 - Retry Offline Disks
 - I/O Aware Mounts
 - API pkg-config Support
 - LBP Verify Tool
- ▶ Upgrade Overview
 - Upgrade Support
 - Detailed Conversion Guide for HPSS 7.5.1
 - Conversion and Q-Rep Tested and Ready
- Q-Verify
- Three Conversion Paths (7.4.2p1, 7.4.3p2, 7.4.3p3)
- Success Starts with a Good Upgrade Plan
- ▶ Upgrade procedure overview
 - Create New 7.5.1 Databases
 - Q-Rep Setup
 - Q-Rep Build and Start
 - Q-Verify Build and Start
 - Monitor Conversion
 - Complete Q-Rep
 - Downtime Upgrade Tasks
 - Post Conversion Tasks
- ▶ Conclusion
 - 3 Sites currently working on Upgrade to 7.5.1
 - 7 Sites have started planning an Upgrade to 7.5.1

Updates for 752

- ▶ HPSS 7.5.2 is a major software release which started in August 2016 with an 18-month duration
- ▶ Current outlook is for release 2Q2018 (May)
 - More than 250 bug fixes and enhancements
 - Metadata conversion will be more modest than 7.5.1
- ▶ 7.5.2 Planned Content
 - Use file system as HPSS device (CR 379)
 - Provide more PVR and VV information in PVL Job Request (Bug 3109)
 - Improve Recover workflow (Bug 5308)
 - New log type: INFO (CR 349)
 - PFTP support for Tape Order Recall (CR 357)
 - Improve Sparse Repack Performance (CR 397)
 - Improve Recover Performance (Bug 5306)
 - Syslog-based HPSS logging (CR 375)
 - ➔ next slide
 - Real-time Disk Ownership (CR 310)
 - I/O Abort (CR 183) / Job Control (CR 280)
 - Log stage performance metrics (CR 320)
 - ➔ next slide
 - SCSI PVR Performance (CR 303 / CR 438) ➔
Météo-France
Full Aggregate Recall (CR 270)
 - Ordered Migration (CR 376)
 - ➔ 7.5.3 (November)
 - Tape Drive Quotas for Recall (CR 383)
 - Run DB2 on non-Core System (CR 386)
 - ...

752 Logging

- ▶ Syslog-based logging (CR 375)
 - Simplified log policy administration
 - Syslog = logging flexibility
 - Improved HPSS log message format
 - SSM reads a syslog file to find Alarms and Events
 - Movers can now easily log both to a local system and the central HPSS log
 - Simpler, powerful log archiving with logrotate
 - New tool for archiving into HPSS (Log Archive Tool)
- ▶ I/O Logging (CR 320)
 - Provide more information about how data is moving through the system
 - Identify files written to a particular volume (disk and tape)
 - Identify drives used for file I/O
 - Additional information for mount/dismount/deferred dismount
 - Identify when file I/O operations began and completed
 - Logging to new INFO type

DB2 History

- ▶ What is it?
 - Db2 configured to maintain historical versions of rows
 - “Base” table stores current versions of data
 - Updated and deleted rows **automatically / transparently** stored in history table
 - Timestamps identify period when row was active ▶
 - No HPSS code changes necessary to deploy
- ▶ Why?
 - Make your metadata more valuable to YOU
 - Analyze HPSS behavior from captured history
- ▶ Example queries:
 - Tape mounts per drive per day (time period flexible)
 - Total PVL job time per day (time period flexible)
 - Total PVL job time per “state” per day (time period flexible)
- ▶ Setup: creating a table that records history
 - Create a table with start/end timestamps and “SYSTEM_TIME” period using implicitly hidden columns
 - Create the associated history table
 - Add versioning to the table to establish a link to the history table
- Implementation Considerations
 - Optional Deployment
 - **No changes required in HPSS**
 - Standard set of query definitions as part of a “tool”.
 - Optimization objects to support expected queries
 - History data space management
 - Db2 History queries can benefit from partitioning

TreeFrog (a new HPSS interface)

- ▶ Voir la présentation TreeFrog

Prochains événements

- ▶ HPSS @ MSST 2018
 - The 34th International Conference on Massive Storage Systems and Technology will be in Santa Clara, California from May 14th through May 18th
- ▶ HPSS @ ISC18 – **second Treefrog demo**
 - The 2018 international conference for high performance computing, networking, and storage will be in Frankfurt, Germany from June 24th through 28th
- ▶ 2018 HUF
 - The 2018 HPSS User Forum will be hosted by the UK Met Office in Exeter, United Kingdom from October 15th through October 18th
- ▶ HPSS @ SC18
 - The 2018 international conference for high performance computing, networking, storage and analysis will be in Dallas, Texas from November 11th through 15th

Merci

Pour plus d'informations, contactez :

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