

Oracle Solaris 10 9/10

Key Features and Benefits

1. FEATURE: Physical to Virtual (P2V) Migration

FUNCTION:

Migrate a physical Oracle Solaris 10 System to an Oracle Solaris Container.

BENEFIT:

Simplifies the migration process by substantially reducing the amount of configuration required through a direct process of taking an image of a physical Oracle Solaris 10 system and installing it in an Oracle Solaris Container.

2. FEATURE: Migrate hostid to Oracle Solaris Container

FUNCTION:

An Oracle Solaris Container can have a unique hostid associated with it.

BENEFIT:

Systems running applications licensed by hostid can now be candidates for consolidation into Oracle Solaris Containers.

3. FEATURE: Zpool autoexpand

FUNCTION:

ZFS now recognizes when an underlying device is expanded and be configured to automatically adjust the pool based on the new size of the expanded LUN.

BENEFIT:

ZFS can be configured to automatically adapt to LUN increases.

4. FEATURE: Triple Parity RAID-Z

FUNCTION:

RAID-Z configuration can now have triple-parity RAID Z redundancy.

In RAID-Z, ZFS uses variable-width RAID stripes so that all writes are full-stripe writes. This design is only possible because ZFS integrates file system and device management in such a way that the file system's metadata has enough information about the underlying data redundancy model to handle variable-width RAID stripes.

BENEFIT:

With triple parity, up to 3 device failures can be sustained without data loss. RAID-Z is the world's first software-only solution to the RAID-5 write hole.

5. FEATURE: Split Mirrored Pools

FUNCTION:

Ability to split a mirrored storage pool, which detaches a disk or disks in the original mirrored pool to create another identical pool.

BENEFIT:

The ability to split off a mirror can be used to increase flexibility for operations like back ups and disaster recovery scenarios. For backups, a mirrored ZFS storage pool can be quickly cloned as a backup pool allowing backups to be performed with no load on the primary system. For DR purposes, the split off mirror can serve as a 'snapshot' to be captured on a regular basis, either attached to the system as a fall back, or reattached to a separate DR system.

6. FEATURE: Pool Recovery

FUNCTION:

New command features are available for recovering a damaged storage pool

BENEFIT:

Non-Oracle storage devices that do not impose the write ordering requirements required by ZFS may result in corrupted

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file systems should some event disrupt the writes. With this enhancement storage administrators can check the integrity of previous versions of the Uber block (the "root" of a ZFS file system) stepping back in time until a stable file system is found. Some changes may be lost, but the overall file system integrity is preserved.

7. FEATURE: Logbias Property

FUNCTION:

Tuning facility for synchronous write behavior optimizations, either by setting to optimize for latency or throughput. Flash devices can have an important impact on lowering latency by allowing writes to be considered complete when written to the flash device "intent log" rather than waiting until those writes are acknowledged by the disk-based storage. However for maximum throughput, it is generally possible to get higher throughput when writing direct to data sets striped across multiple disks and not employing the flash device. This feature allows tuning for either environment.

BENEFIT:

The Oracle Solaris ZFS logbias1 property improves performance when writing or caching database files.

8. FEATURE: Enhancements for Oracle Database Users

FUNCTION:

A variety of enhancements and bug fixes result in a wide range of file system performance improvements for ZFS.

BENEFIT:

Improved database and cache performance, as well as general file system performance.

Other Enhancements to Oracle Solaris 10 9/10 include:

9. FEATURE: JDK 6

FUNCTION:

JDK 6 (1.6.0_21) is now bundled with Oracle Solaris

BENEFIT:

JDK 6 offers broad set of improvements over JDK 5.0, bundled with the previous release of Oracle Solaris. This particular version has a number of SPARC and x86 performance improvements.

10. FEATURE: Upgrading Clustered Zones

FUNCTION:

Provide ability to upgrade clustered zones using standard upgrade.

BENEFIT:

Enables the ability to upgrade the Oracle Solaris version when running a clustered zones environment. In the past, this was only possible using Oracle Solaris Live Upgrade.

11. FEATURE: Brazilian Portuguese localization support

FUNCTION:

Brazilian Portuguese has been added to the list of languages supported by Oracle Solaris.

BENEFIT:

Translates tools and messages in Oracle Solaris to Brazilian Portuguese to simplify use by Portuguese speaking users. Selected user documentation is also translated.

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12. FEATURE: New Oracle Solaris Unicode locales **FUNCTION:**

Add unicode locales for the following:

af_ZA.UTF-8 (South Africa)

en_SG.UTF-8 (English, Singapore)

zh_SG.UTF-8 (Chinese, Singapore)

ms_MY.UTF-8 (Malaysia)

id_ID.UTF-8 (Indonesia)

bn_IN.UTF-8 (Bengali, India)

en_IN.UTF-8 (English, India)

gu_IN.UTF-8 (Gujarati, India)

kn_IN.UTF-8 (Kannada, India)

mr_IN.UTF-8 (Marathi, India)

te_IN.UTF-8 (Telugu, India)

ta_IN.UTF-8 (Tamil, India)

BENEFIT:

Supports applications written for these locales.

13. FEATURE: Install Time Updates (ITU) for SPARC systems

FUNCTION:

Third-party hardware vendors can deliver driver updates on CD/DVD or USB storage

BENEFIT:

This removes the requirement for vendors to submit their drivers months in advance of a Oracle Solaris release giving them more flexibility to provide quality drivers.

14. FEATURE: Tools for creating customized installation media

FUNCTION:

New tools that enable customers to modify the Oracle Solaris installation media with new packages and patches. These tools can be used to deliver software updates for hardware platforms and to produce customized installation media.

BENEFIT:

Greater flexibility for customers to integrate their environmental requirements into Oracle Solaris installation process.

15. FEATURE: Automated rebuilding of sendmail configuration files

FUNCTION:

New properties have been added to the sendmail service to provide for the automatic rebuilding of the sendmail configuration files.

In addition, the sendmail instance is split into two instances to provide better management of the traditional daemon and the client queue runner.

BENEFIT:

Simplify maintenance and increase flexibility for administrators.

16. FEATURE: InfiniBand Infrastructure Enhancements

FUNCTION:

The initial installation of InfiniBand nodes on a fabric has been modified to allow IPoIB instances to join the appropriate partition without intervention. Also this release detects and responds quickly to failures of the subnetmanager to assure a smooth transition when errors occur.

BENEFIT:

Improves the performance of IPoIB in the UDdatagram mode. As a result, customers you will notice improved throughput in

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theUDmode and decreased CPU utilization of the IPoIB driver in general.

Numerous features have been added to Oracle Solaris in support of the next release of Oracle VM Server for SPARC. As that product releases after Oracle Solaris 10 9/10, those enhancements will not be covered here.



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