

Mark 5 Software Management

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Application Software Status

- Conduant SDK 7.5 release is proving to be very stable.
- For compatibility reasons, correlators should upgrade to SDK 7.5 first, followed by stations.
- Haystack supports
 - Mark 5A as a Data Input Module (DIM)
 - Mark 5A and A+ as a Data Output Module (DOM)
 - Mark 5B and B+ as a DIM
- Mark 5B DOM support is correlator specific.

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OS Software Status

- Red Hat 9 is no longer supported
- Debian “Sarge” Linux OS distribution has been chosen as the new standard OS
 - Standard distribution is 2.4.27 kernel; suitable for non-high-performance stations
 - Easy upgrade to 2.6.8 (tested) for e-VLBI
- Plan support for Debian “etch” with 2.6.18 kernel, which has further high-performance updates
 - Conduant is working to build against this distribution
- Now testing distribution image with each mother board (Dell, SuperMicro, Intel)
- Plan to release this OS update as a standard ISO image.

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New Linux Distribution

- Requirements
 - Support 2.6 kernel.
 - Capability to upgrade the distribution to later kernels
 - with minimal changes to the distribution.
 - Minimal changes are defined as only the kernel and supporting software, not overhaul of the application software installed.
 - Must be familiar to the VLBI community.
 - Must be free to the community
 - Must be supported for 3-5 years (security patches)
 - Must be stable for production VLBI
 - Jungo driver must work with the distribution
 - Conduant software must work with the distribution
 - Must support PATA and SATA disk drives

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Distribution Families

	Debian-Based		Red Hat-Based		
Distro	Debian	Ubuntu	Red Hat	Centos	Fedora
Notes	Stable, lags behind others, but this is changing - pressure from Ubuntu	Use Debian testing as base develops, releases	Enterprise is most popular, but license fees / support	Free version of RHE.	RHEL is derived from Fedora
Cost	Free	Free	\$	Free	Free
Support (years)	4 years	5 Server 1.5 Other	7 years	?	NA
User Familiarity	FS	-	Mark5	-	-
Stability	5-5	4-5	3-5	3-5	2-5
Develop. Versions	Testing ?	6 months	18 months, See Fedora	18 months, Fedora	4-6 months
Packaging	Deb	Deb	RPM	RPM	RPM
Latest /next Release	Sarge 2.6.8 / Etch (Dec 06) 2.6.18	Dapper Drake- LTS 2.6.15 / Edgy Eft 2.6.17	v4 2.6.9 / v5 (Dec 06) 2.6.18	V4 2.6.9/ v5 (Jan06) 2.6.18	Core 6 2.6.18

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Advantages

- Debian-based distribution
 - Field system familiarity
 - Single distribution knowledge
- Stable version - Sarge
 - 2.4.27 or 2.6.8 kernel
 - Upgrading to "etch" is simple
 - Point to testing
 - Upgrade kernel
 - Upgrade distribution
- Allows Ubuntu to be used if needed for development
 - Leading edge kernels
 - For leading edge applications

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Implementation

- New Linux file directory structure planned
 - Being implemented
 - Proposed directory structure
 - Placed under version control - CVS.
- Moving towards:
 - Standard Package Management
 - Creating a standard distribution package
 - Based on the Debian Sarge distribution
 - Mark5_1.0.0.src.deb
 - Mark5_1.0.0.deb
 - Utilizing dependencies
 - StreamStor, gcc,
 - Creation of a standard MAN page

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