Mark5 OS & Mark5C Software Development

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Objective

- State of Mark5's OS
- Upgrade Approach
- Mark5 Application Software
- What's next?
- Maintenance
- Mark5C Software
- Demonstration

State of Mark5's OS

- Debian Etch
  - Latest OS distribution supported
  - Linux kernel 2.6.18 – 2.6.24 etch-n-half
  - Some RH E4/E5 used
- Debian Sarge, RedHat 9.0
  - Kernel 2.4.XX – 2.6.8
  - No longer supported
    - RH9 support ceased 4/2003
    - Debian Sarge ceased

State of Mark5's OS

- Why have sites upgraded their OS's
  - Security concerns / maintainability
    - Mark5 is connected to a network
  - Network performance improvements
    - Linux kernel network stack improvements
    - Network interface cards (NICs) support
      - 1 Gbps / 10 Gbps NIC
  - New motherboard support
    - Old distributions do not support chipsets
  - Bug fixes / capabilities streamstor controller card
    - SATA support
    - Memory Leaks

Mark5 Application Software

- What it is not:
  - No longer a single tar ball
  - No longer support Mark5_Update
    - Upgrade mechanism
  - Directories removed
    - /home/jball
    - /home/streamstor

Mark5 Application Software

- What it is:
  - Two debian package
    - Mark5 Application
      - mark5a_1.0.X-i386.deb
      - mark5b_1.0.X-i386.deb
    - streamstor_1.X.X-i386.deb
  - Installed / maintained through a standard package manager
    - synaptic (apt-get) / aptitude
    - dpkg

Upgrade Approach

- Debian mirror at Haystack
  - edit /etc/apt/source.list and add:
    deb http://evlbi.haystack.mit.edu/debian/   binary/
  - run apt-get update
- For Mark5A systems
  - apt-get install mark5a
    - Updates mark5a / streamstor
  - apt-get install streamstor
    - Updates streamstor only

Upgrade Approach (cont)

- For Mark5B systems
  - apt-get install mark5b
    - Updates mark5b / streamstor / mk5bio
  - apt-get install streamstor
    - Updates streamstor only

What's Next

- Presently 2 stable Debian OS distro's
  - Etch / Lenny
- Support for Etch
  - thru February 2010
  - Debian supports second distribution for 1 year
    - After release of new distribution
- Linux kernel 2.6.26 and higher
  - Not Mark5 Application dependent
  - Conduant / Jungo driver dependent
  - Beta version in house under test
- 64 bit kernel support
  - Jungo / SDK dependent
  - Under verification at Conduant.

Maintenance

- Recommend signing up for
  - **debian-security-announce mailing list**
    - http://lists.debian.org/debian-security-announce/
  - Informs the users about security problems by posting security advisories about "all" Debian packages on this list.

- Alternative
  - Update the package list weekly
  - Upgrade the required packages if any

Mark5C Software

- Under development
- Record to standard OS system disk available.
- Delay in FUSE write capability
- Expected release date for recording to Conduant via 10G interface
  - Dependent on hardware / SDK features implementation
  - Non-Bank Mode version June 5th
  - Bank Mode version July 10th
- Used in the testing of the Mark5C.

Mark5C Demonstration

Questions ?