

open



USE



IMPROVE



EVANGELIZE

OpenSolaris Introduction

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OpenSolaris Project

- Released on June 14th, 2005
 - Opened Solaris source code under CDDL
- Now in its 2nd year

```

static int
copen(int startfd, char *fname, int filemode, int createmode)
{
    struct pathname pnc;
    vnode_t *vp, *dvp;
    file_t *fp, *startfp;
    enum vtype type;
    int error;
    int fd, dupfd;
    vnode_t *stap;
    proc_t *p = curproc;

    if (startfd == FDCWD) {
        /*
         * Regular case.
         */
        startvp = NULL;
    } else {
        /*
         * We're here via openat().
         */
        char startchar;

        if (copyln(fname, &startchar, sizeof(char))
            return (set_errno(ERANGE));
    }

    /*
     * if startchar is / then startfd is ignored
     */
    if (startchar == '/')
        startvp = NULL;
    else {
        if ((startfp = getf(stap, startfd)) == NULL)
            return (set_errno(ENOENT));
        startvp = startfp->f_vnode;
        VERIFY2(stap, p);
        rehash(stap, startfd);
    }

    if (filemode & FXATTR) {
        /*
         * Make sure we have a valid request.
         * We must either use a real fd or AT_FDCWD
         */
        if (startfd != AT_FDCWD && startvp == NULL) {
            error = EINVAL;
            goto out;
        }
    }
}

```

open(2)

```

/*
 * if startchar is / then startfd is ignored
 */
if (startchar == '/')
    startvp = NULL;
else {
    if ((startfp = getf(stap, startfd)) == NULL)
        return (set_errno(ENOENT));
    startvp = startfp->f_vnode;
    VERIFY2(stap, p);
    rehash(stap, startfd);
}

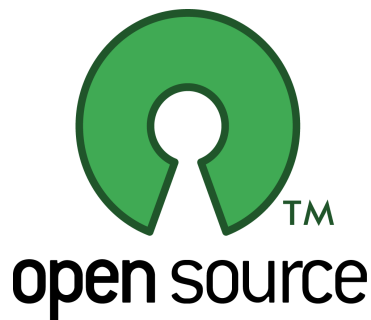
if (filemode & FXATTR) {
    /*
     * Make sure we have a valid request.
     * We must either use a real fd or AT_FDCWD
     */
    if (startfd != AT_FDCWD && startvp == NULL) {
        error = EINVAL;
        goto out;
    }
}
}

```



What is OpenSolaris Project?

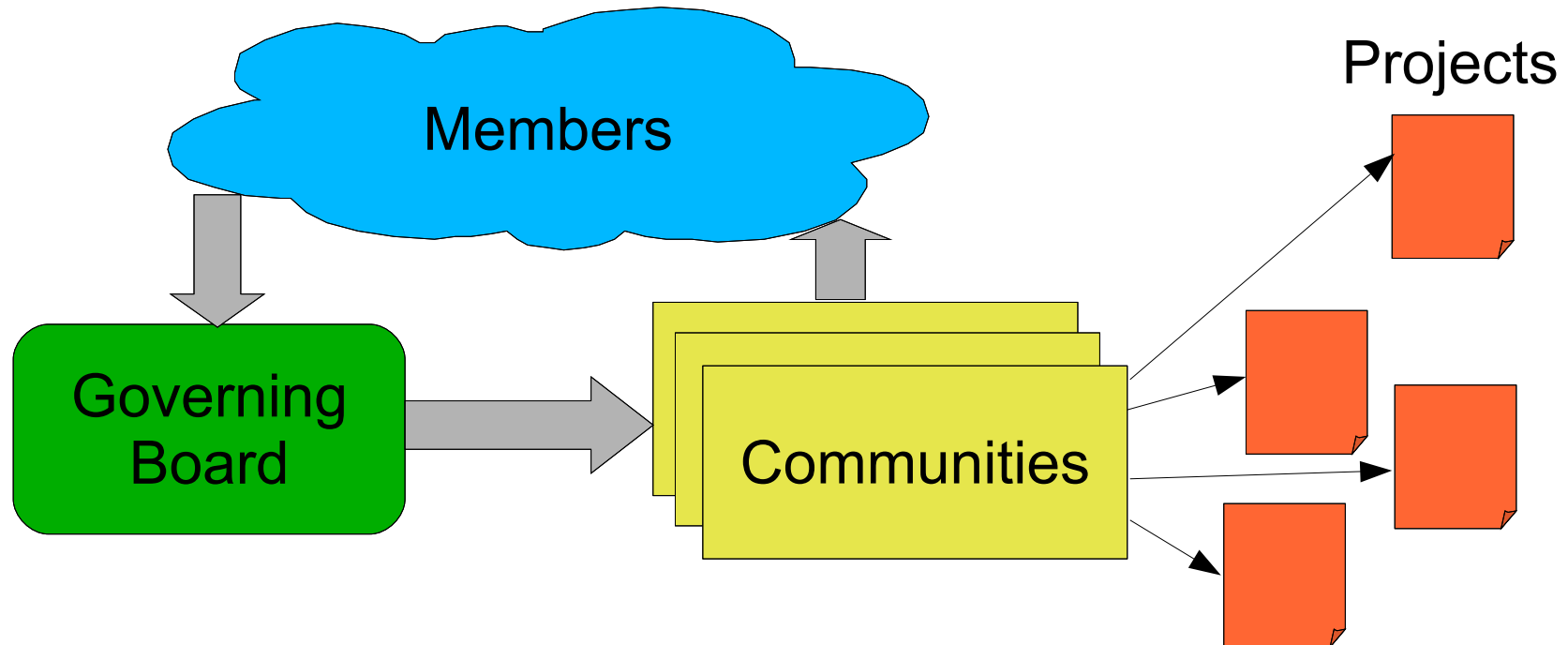
“An open source community and place for collaboration and conversation around OpenSolaris technology.”



OpenSolaris project web
<http://www.opensolaris.org/>

OpenSolaris Organization

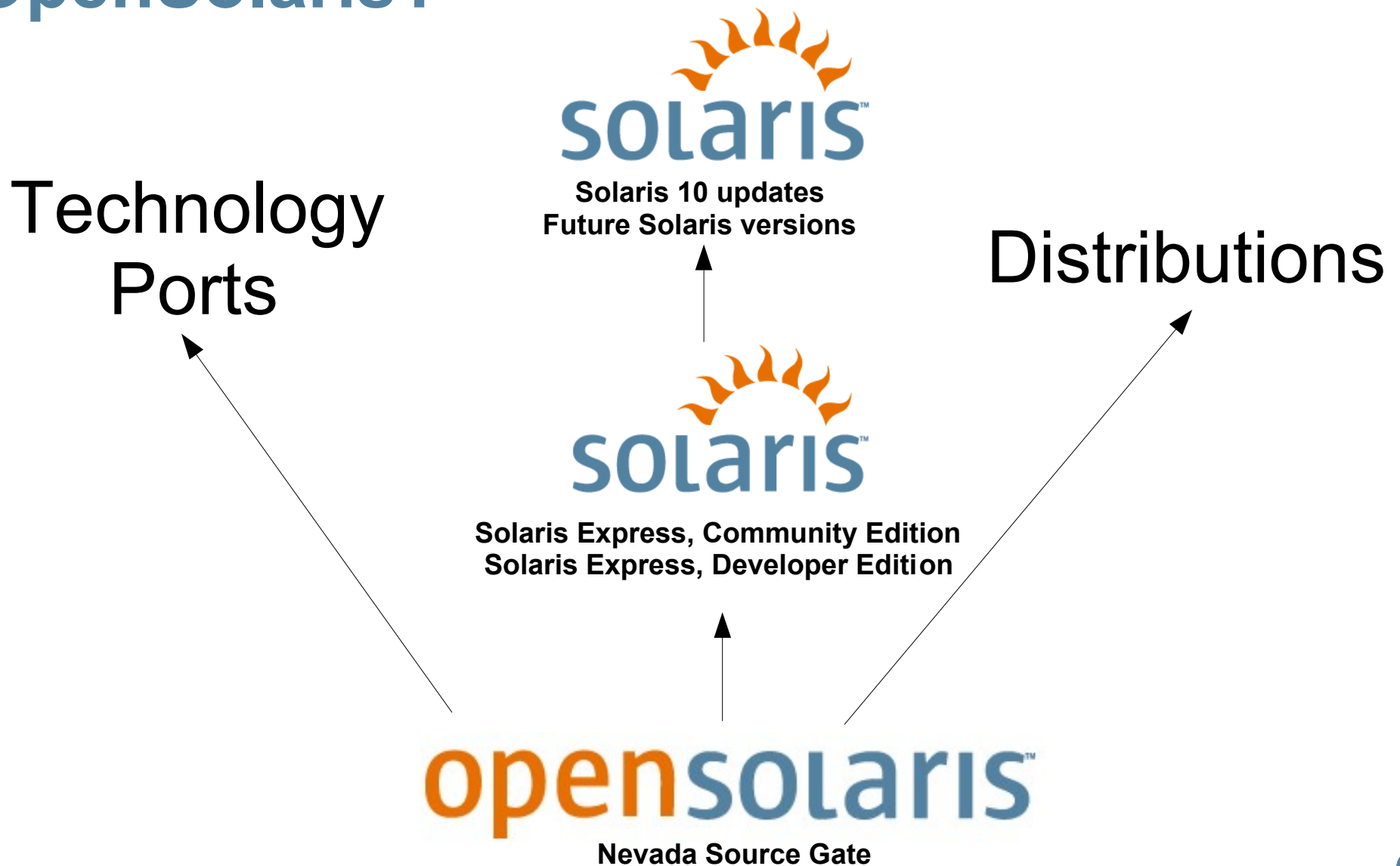
- OpenSolaris Governing Board (OGB)
 - Manages and directs OpenSolaris community
- 42 Communities
 - People sharing the same interest concerning, e.g., SMF
- 168 Projects, endorsed by communities
 - SMF: Enhanced SMF Profiles, Visual Panels, ...



OpenSolaris Users Groups



How Does Innovation Work in OpenSolaris?





Technology Ports

- DTrace (Dynamic Tracing)
 - Mac OSX 10.5 Leopard
 - FreeBSD (<http://people.freebsd.org/~jb/dtrace/>)
- ZFS (Zettabyte File System)
 - Mac OSX 10.5 Leopard
 - ZFS is being integrated in FreeBSD 7-CURRENT and will be available as “experimental feature” in FreeBSD 7.0-RELEASE
 - Linux – ZFS on FUSE



Why to Use OpenSolaris

- An alternative to other open source operating systems, like Linux, FreeBSD
- A unique combination
 - Commercial OS, which is now open sourced
 - Benefit from proven code
 - Backward compatibility and stability
- Direct access to cutting edge technologies
 - DTrace, ZFS, Zones, SMF
- Option to participate
 - OpenSolaris projects and communities
 - Create your own project





Using OpenSolaris

- Search the www.opensolaris.org
- Install on OpenSolaris based distribution
- Play with it
- Browse the source code
- Build
- Contribute

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OpenSolaris Community Distributions

- SchilliX – the first distribution
 - Released on June 17th, 2005
 - <http://schillix.berlios.de>



SchilliX

- Nexenta – OpenSolaris kernel + GNU
 - Inspired by Debian and Ubuntu
 - <http://www.gnusolaris.org/gswiki>



- BeleniX – LiveCD, LiveUSB
 - Focus on fast boot
 - http://www.genunix.org/distributions/belenix_site/





OpenSolaris Sun's Distribution


- Solaris Express, Community Edition

- The latest build OpenSolaris sources
- Released every 2 weeks

- <http://www.opensolaris.org/os/downloads/>



- Solaris Express, Developer Edition

- Targeted to developers
- SunStudio 12 and  **NetBeans IDE 5.5**
- Updated every 3 months

- Current version: 9/07

- <http://developers.sun.com/solaris/downloads/solexpdev/>





Indiana

- Project started by Ian Murdock
- A binary distribution of OpenSolaris developed by OpenSolaris community
 - People external and internal to Sun
 - Can be used as a basis for derived distributions
 - Developer preview was released on October 31st
- Live CD, installation from CD
 - It will be possible to install other packages from repositories at the internet
- The first version should be available in March 2008



OpenSolaris and Solaris Resources

- Academic and Research community
 - <http://www.opensolaris.org/os/community/edu>
 - OpenSolaris curriculum “plugins”
- OpenSolaris discussions
 - <http://www.opensolaris.org/os/discussions/>
- Talks and presentations
 - http://www.opensolaris.org/os/community/os_user_groups/os-presentations
- Sun Developer Network (SDN)
 - <http://developers.sun.com>
- BigAdmin
 - <http://www.sun.com/bigadmin/home>

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Thank you!

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<http://blogs.sun.com/lr>

<http://blogs.sun.com/openrpe>

“open” artwork and icons by chandan:
<http://blogs.sun.com/chandan>

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