



**SINE NOMINE**  
ASSOCIATES

## OpenAFS and TransArc AFS Support at Sine Nomine Associates

Sine Nomine Associates, Inc., is pleased to provide complete support capabilities for OpenAFS and TransArc AFS environments. Our expert staff is uniquely positioned to handle all of your continuing support and development needs for AFS. Our solutions represent the standard of excellence and service that are hallmarks of a well-planned architecture and implementation. The results are robust solutions that are expandable, scalable, reliable and usable. We provide service solutions that will please the CTO, and do so at prices that will even make the CFO smile.

AFS (Andrew File System) is a distributed file system that provides a file space architecture aimed at dispersed computing environments and a set of tools geared toward ease of use and manageability. Pioneered at Carnegie Mellon University and developed as a product by TransArc Corporation (now IBM Pittsburgh Labs), it was released as Open Source by IBM in 2000. AFS offers a client-server architecture for file sharing, providing location independence, scalability and transparent migration capabilities for data.

### Introducing the One-Stop Shop for all your OpenAFS and TransArc AFS needs!

- Are you concerned about support for your mission-critical AFS environment?
- Are you worried about who will handle your AFS upgrades and defect resolutions in the future?
- Are you considering an AFS deployment, or development of additional cells for your existing system?

### Summary of Our AFS Offerings

1. Continuing Support on 18 Platforms
2. Upgrade Maintenance, defect resolution and compatibility assurance
3. New Development for additional features not included in base code
4. AFS Solution Deployment for new environments or enhancements to your existing environments

# OpenAFS Consulting

Sine Nomine Associates' OpenAFS Consulting services provide organizations with assessment, analysis, design, planning, and implementation assistance.

We have been privileged to deliver to our customers:

- Server hardware and OS configurations
- Client hardware and OS configurations
- Network infrastructure and topology
- Data storage
- AFS server configurations
- AFS client configurations
- AFS file space layout
- Volume location, replication and access statistics
- Backup and recovery infrastructure and procedures
- Disaster recovery procedures
- Security procedures
- Administrative procedures, tools, automation, and in-house practices
- Software installation and upgrade procedures
- Growth and change expectations

To assist our customers with the set-up, maintenance, and growth transformation, Sine Nomine Associates provides compiled package offerings. Any of these offerings will be adjusted to the customer's unique business and IT needs. This allows our customers to make their AFS implementations strong, and to keep them viable over the course of time.

Our basic packages include:

- [OpenAFS Planning](#)  
This package is intended for new AFS users. Design and implementation for OpenAFS projects, such as new cell deployments, virtualization planning, and disaster recovery.
- [OpenAFS Migration and Upgrades](#)  
On the behalf of a customer, we execute cell upgrades from Transarc / IBM AFS, or older versions of OpenAFS, to the latest stable version of OpenAFS. This often includes updating the way that cells are managed and configured, in order for the customer to leverage many new and improved OpenAFS features.
- [Cell Assessment](#)  
A cell assessment entails a comprehensive health check to verify best practices operation of OpenAFS cells. Cell assessments are based on data gathering and analysis, and they culminate in specific recommendations.
- [Data Recovery](#)  
Occasionally, even the best of all systems fails. In some instances, data is available in backup, but specific OpenAFS knowledge is required to recover that data. Acting for our customer, Sine Nomine Associates will recover data from backup media -- if data recovery is possible at all -- and return it to active availability.

# OpenAFS Development

Upon request and matching specific customer needs, Sine Nomine Associates offers development services for OpenAFS and thereby delivers new or improved functionality.

## Compatibility Testing and Development

Sine Nomine Associates provides services to test compatibility between OpenAFS and other infrastructure software (for example, Linux distributions such as SLES), and will implement source code fixes to any incompatibilities that might be discovered.

## Binary Builds

Sine Nomine Associates builds server-specific OpenAFS binaries for many customers, insuring the software is compiled expressly for the target servers.

## Custom Features

Sine Nomine Associates has more than a decade of experience in enhancing OpenAFS to meet the growing needs of the user community. We develop features fully compatible with OpenAFS, so they can be included upstream into the mainline source tree. Some features developed by Sine Nomine Associates include:

- Usermode AFS Client
- Dynamic Vcache Allocation
- Demand Attached File Server
- Limitations on Server Keepalives
- OpenAFS over WAN Optimizations
- File Prefetch
- OpenAFS / XEN Integration
- Persistent OpenAFS For Windows Caching
- Volserver conversion from LWP to native threads

# OpenAFS Support

Sine Nomine Associates provides enterprise-level support for OpenAFS. In doing so, we allow small to Fortune 500 customers to benefit from high functionality offered by open source code at minimal cost, and supplement such low-cost solutions with our enterprise-level, 24x7, “no excuses” systems support. In concert, these options make the perfect marriage both from a technological and from a financial point of view.

We actively support customers who are running OpenAFS on the following platforms:

- Solaris 8, 9, 10 SPARC
- Solaris 8, 9, 10 x86
- Red Hat 3, 4, 5 ia32
- Red Hat 3, 4, 5 x86\_64
- SLES 9, 10
- AIX 5, 6
- HP-UX 11i
- Linux on System z
- Irix
- Debian
- Mac OS X

# OpenAFS Training

In order to nurture and grow the IT engineering skills at our customers, Sine Nomine Associates offers professional training for OpenAFS.

Existing training options include:

- [Introduction to AFS](#)  
Sine Nomine Associates has trained many organizations new to AFS on how it works, and how to operate effectively in an AFS environment. This course has even been used by third-party server support organizations for training their front-line support technicians in identifying and evaluating AFS trouble reports.
- [Advanced AFS Training](#)  
Sine Nomine Associates provides training for administrators responsible for operating and maintaining large-scale AFS environments. Companies use this course to train new members of their OpenAFS expert teams.
- [OpenAFS Developer Training](#)  
This course provides basic education for developers interested in working on OpenAFS source code development as volunteers. The course familiarizes the developer new to OpenAFS with overall structures in the code, and with basic principles inherent to OpenAFS.

In a customer testimonial, a major semiconductor manufacturer writes:

*For many years, our organization has used AFS to store and distribute critical design and operation information across a geographically diverse team of engineers and technicians. In 2007, a strategic decision was made to evaluate our use of Transarc AFS, and consider the future of our distributed file system needs. We called upon Sine Nomine Associates to assist us in our transition planning. Sine Nomine Associates provided us with the plan and expertise to migrate our extensive Transarc AFS environment to OpenAFS, and has provided excellent continuing support for the resulting architecture.*

*Our support inquiries vary from information about how OpenAFS interacts with operating systems and other applications, to dealing with critical outages that have resulted from physical problems with the systems or the spaces in which systems are housed. In all cases, Sine Nomine Associates responds promptly and effectively, troubleshooting the issue, and providing us with, not only a solution, but an explanation as to why that solution will address the reported issue. Furthermore, Sine Nomine Associates pro-actively provides advice for future planning for our environment. We consider them part of our production OpenAFS team.*

*We are proud to work with Sine Nomine Associates and gladly recommend their OpenAFS expertise.*