

# LONE EAGLE SYSTEMS INC.

---

## LONE EAGLE SYSTEMS INC. COMPANY PROFILE

Lone Eagle™ Systems Inc. provides professional consulting services where up-to-date knowledge of open systems and Internet technologies is essential. Striking an uncommon balance between a broad perspective of computing technologies and years of in-depth experience, Lone Eagle Systems undertakes projects where the challenges involve not only understanding new technologies — but an ability to apply them to a problem at hand, and clearly communicate the importance of the resulting solutions. Projects undertaken by Lone Eagle Systems range from technology assessments for venture capital firms to proof-of-concept implementations of Application Service Provider (ASP) products. The company has provided assistance to clients ranging from small start-up companies to Fortune 500 enterprises; a partial client list includes: Fujitsu Computer Products of America, Intel Corporation, Opus Capital, PointSource Communications, The Root Group, Inc., Sun Microsystems, U S WEST, Vyvx, Inc., and The Williams Companies.

The lasting quality of Lone Eagle Systems' work is due to its clearly-written whitepapers, results, findings, and software documentation, all of which helps to ensure that the benefits of its work accrue to its clients long after projects are completed. Although most of Lone Eagle Systems' work results in well-documented findings, they reflect the work products of a wide range of specialties:

- In-Person Consulting services have enabled work groups to produce high-quality results within budget and on schedule.
- Research and Reporting services provide in-depth analysis of technical issues and clearly-communicated results.
- Proof-of-Concept Prototyping often deepens research results through the development of prototype software and system configurations.
- Technical Marketing Communication activities require a quick ramp-up in understanding a client's technical accomplishments followed by the ability to communicate its key results to a technical audience with just the right level of marketing messaging.
- Computer Systems Performance Evaluation projects provide in-depth performance characterizations typically with cutting-edge technologies where little or no measurement capabilities previously existed.

Lone Eagle Systems has provided both marketing and engineering assistance to its clients, and is effective at many organizational levels — from the vice-presidential to the marketing and engineering staff level.

## IN-PERSON CONSULTING SERVICES

Lone Eagle Systems provides in-person consulting services that include technology assessment for venture capital firms, technical project management, and even group process facilitation that results in more active and effective project teams. Lone Eagle Systems is often engaged where a fresh, outside perspective can help eliminate road-blocks and enable project teams to rapidly complete and meet their goals. Because of Lone Eagle Systems' broad experience with different disciplines, Lone Eagle Systems can speed communication across organizational boundaries, and can also leverage its knowledge of the company to effectively conduct its work.

Lone Eagle Systems has worked with its clients to create consulting service delivery guides, and has provided technical and project management expertise to facilitate the preparation of courses and presentations. For more than two years, Lone Eagle Systems worked with a forward-looking digital video service provider, helping with server product evaluations, and serving as a liaison with vendors to influence product designs to better suit the needs of its clients.



## RESEARCH & REPORTING

Lone Eagle Systems conducts research projects where both an in-depth engineering background and clearly-communicated results are of primary importance. Skilled at bridging the gap between marketing and engineering, Lone Eagle Systems has a long track record of undertaking research projects where the result educates its clients' marketing, sales, and systems engineering staff — while raising the level of its clients' expertise in the eyes of its customers.

Nowhere has Lone Eagle Systems' work been more valuable than in the service provider area. Since 1996, Lone Eagle Systems has been researching and preparing up-to-date versions of Sun Microsystems' *Internet Service Provider Configuration Guidelines* whitepaper. Prepared through collaboration, research, and interviews with Sun staff and its ISP customers, this document has served to promote the use of quality products and approaches to designing ISP architectures.

Other of Lone Eagle Systems' research projects include researching and preparing a guide to architecting and managing Internet Data Centers (IDCs), storage-on-demand architectures for IDCs, a guide to building automated Web hosting environments, and a series of presentations with speaker notes that provide guidance to service providers in areas such as managing growth, configuring for high availability, how to leverage server products, and how to choose appropriate serviceability models.

## PROOF-OF-CONCEPT PROTOTYPING

Beyond research and reporting, Lone Eagle Systems develops proof-of-concept prototypes where diverse technologies are combined to create innovative solutions to complex problems. This level of development work is called for when concepts need to be proven or more in-depth research results need to be obtained:

- Lone Eagle Systems helped to prototype a hierarchical storage management system that integrated storage products from multiple vendors — serving as a proving ground for technology that can change the way that data storage stacks are configured and managed in the future.
- When one client wished to deploy a multi-vendor video solution, Lone Eagle Systems developed a multi-threaded, Java™ technology-based, server-independent interface that demonstrated how the company's core software could control a heterogeneous network of digital video servers in a vendor-neutral fashion.
- One key project was adapting Sun's iPlanet™ Portal Server software — originally designed for an enterprise deployment — to prove its effectiveness in an Application Service Provider (ASP) environment. The result was a detailed cookbook that described to service providers both the benefits and the nuts-and-bolts details of providing portal services to business customers.

As a consultant to service providers, Lone Eagle Systems practices what it preaches by maintaining its own network of heterogeneous workstations, Web, mail, and portal servers. These are linked together and connected to the Internet using broadband and wireless networks, and uses techniques including perimeter security, demilitarized zones, and virtual private networks.

## TECHNICAL MARKETING COMMUNICATION

Lone Eagle Systems is frequently called upon to clearly present its clients' technical innovations with a subtle infusion of marketing messages. With a rare ability to make technical innovations understandable to broad audiences, the resulting whitepapers, technical briefs, presentations, and courses provide clients with effective tools that have a dramatic effect on the bottom line.

Lone Eagle Systems has prepared nearly fifty such marketing tools its clients. These



materials have been so effective that they have been used in product launches, feature stories on Web sites, and have facilitated head-to-head competition between its clients and their rivals.

## COMPUTER SYSTEMS PERFORMANCE EVALUATION

Long a core competency, Lone Eagle Systems has completed numerous performance evaluation, improvement, and capacity planning projects that have enabled its clients to make business decisions founded on real performance data:

- One of the more ambitious studies conducted by Lone Eagle Systems was a performance characterization of digital video streaming over a trial broadband cable network. This project involved creating a harness which could invoke the load of hundreds of home customers with digital set-top boxes and monitor the quality of still and streaming video that the cable plant could produce. This project helped locate numerous bugs and bottlenecks that impaired system performance, and it resulted in a precise characterization of system response under different workloads — enabling an accurate cost per user calculation for the video servers to be deployed.
- Lone Eagle Systems conducted a performance characterization of UNIX® desktop tool performance between different hardware architectures. With some differences in performance attributable to different frame buffer cards, and some due to differences in X Window System server implementations, this study enabled operating system tuning to achieve performance equity between systems.
- Some of Software Scientist Steve Gaede's earliest — and most well-known work — was developing a benchmark that measures the capacity of the UNIX operating system to scale onto various platforms. Developed at Bell Laboratories in 1979, the benchmark applies a model workload at increasing levels of concurrency in order to quantify a system's maximum throughput, as well as obtaining qualitative measures of a system's stability. The benchmark has been so popular throughout the industry that it was included in the SPEC suite of benchmarks in 1991. In fact, the major UNIX system vendors still use this benchmark to test performance and stability as a part of their nightly operating system builds. In its capacity as an Affiliate of SPEC, Lone Eagle Systems has worked with SPEC representatives on updated benchmarks using the same time-proven technique.

## COMPANY BACKGROUND

Lone Eagle Systems Inc. was founded in 1994 by Software Scientist Steven L. Gaede in order to make his and his colleagues' collective experience available to a wide range of forward-looking companies, often in specific technical areas where its clients' full-time staff requires additional knowledge or assistance. Lone Eagle Systems Inc. is incorporated in the state of Colorado.

Lone Eagle Systems is a good corporate citizen, contributing time and resources to both the local UNIX user community, and to the global computer systems performance evaluation community. Lone Eagle Systems proudly sponsors the Front Range UNIX Users Group, and is an affiliate of SPEC, the Standard Performance Evaluation Corporation.



## CONTACT INFORMATION

Steven L. Gaede, President  
Lone Eagle Systems Inc.  
3023 Fourth Street  
Boulder, Colorado 80304

(303) 444-9114  
*gaede at loneagle.com*  
*http://www.loneagle.com/*

## COPYRIGHT AND TRADEMARKS

© 2001 Lone Eagle Systems Inc.

Lone Eagle is a trademark of Lone Eagle Systems Inc.

Sun, Sun Microsystems, Java, and iPlanet are trademarks or registered trademarks of Sun Microsystems, Inc., in the United States and or other countries.

UNIX is a registered trademark in the United States and other countries, exclusively licensed through X/Open Company, Ltd.

