



# Ansaldo STS Italy

To ensure the safety of its railway automation solutions, Ansaldo STS needed a highly reliable operating system, and chose SUSE® Linux Enterprise Server. The new environment not only achieves the targeted levels of availability—it has also saved on hardware and operating system costs by breaking the company's reliance on proprietary technologies.

### Overview

Ansaldo STS designs, installs and manages signalling and automation systems and components for rail operators. Its automation solutions move trains and manage traffic across more than 5,000 km of Italy's rail network. The company also has customers in the US, UK, Sweden and several other countries.

### Challenge

When Ansaldo STS Italy began looking for a new operating system for its automation solutions, availability was the number one concern. Railway automation relies on the ability to move trains and operate level crossings safely on a tight schedule. Any disruption of the IT systems that manage rail traffic and forecasting can lead to severe delays and significant inconvenience to passengers.

"Our agreed service levels for customers in Italy stipulate that there should be less than five minutes downtime per year. These are very strict requirements, but that is what our type of systems requires," said Luca Parodi, System Engineer at Ansaldo STS. "We originally used a UNIX\* platform with proprietary HP\* hardware and although the availability was good, the costs were high."

Over the past several years, as high-availability clustering technologies for Linux\*

operating systems have become more mature, Ansaldo STS started moving towards an open source solution. However, with few Linux distributions backed by enterprise-class support, the company was wary of migrating too many systems too quickly.

### Solution

"About three years ago we decided that enterprise Linux had come of age: Red Hat\* Enterprise Linux and SUSE Linux Enterprise had become viable options for our business," said Luca Parodi. "We selected SUSE Linux Enterprise because we felt the support from Novell was superior, especially in Europe, and because Novell certifies the clustering file system and cluster-fail over solution that we chose."

Ansaldo STS deployed SUSE Linux Enterprise Server on a number of Intel\* and AMD\* processor-based servers from IBM. The servers are grouped clusters.

"Our clients demand flexible and extremely reliable solutions: in other words, they need mission-critical applications," said Parodi. "The combination of Oracle and SUSE Linux Enterprise Server on IBM\* hardware gives us extremely high availability. As a result, we can guarantee our clients less than five minutes total downtime per year."

### Ansaldo STS Italy at a glance:

*Provider of rail signalling and automation solutions*

#### ■ Industry:

Transportation

#### ■ Location:

Italy

#### ■ Products and Services:

SUSE Linux Enterprise Server  
SUSE Linux Enterprise Desktop

#### ■ Results:

- *Reduced hardware and operating system costs by moving from UNIX-based systems to SUSE Linux Enterprise*
- *Achieved service level targets for availability*
- *Increased flexibility through adoption of open source technologies*

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#### Luca Parodi

*System Engineer  
Ansaldo STS Italy*



**“SUSE Linux Enterprise Server delivers high levels of performance even on relatively low-end commodity servers.”**

**Luca Parodi**  
System Engineer  
Ansaldo STS Italy

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Novell helped with the implementation, and provides Ansaldo with technical support, as well as training. The company also worked with H4T, a Novell® Partner and Linux specialist, to optimise the platform.

Among its products, Ansaldo STS also provides a turn-key infrastructure solution to support the design and visualisation of complex rail networks. The solution runs on high-end workstations with powerful video cards, capable of serving up to 16 monitors. SUSE Linux Enterprise Desktop provides a high-performance operating system for this solution.

“Novell Identity Manager saves time and administrative effort across a number of areas,” said Krutzler. “It is now fast and easy to communicate electronically with any specific group of students.”

## Results

Ansaldo STS has now migrated all its automation solutions based on server infrastructure to SUSE Linux Enterprise Server.

“By helping us move away from proprietary hardware and operating systems, SUSE Linux Enterprise has freed us from being tied

to one vendor,” said Parodi. “This means we can make the optimal platform choices that are more suited to our needs and more competitive.”

These benefits help Ansaldo STS customers cut their full-life solution costs and simplify their maintenance strategies.

“SUSE Linux Enterprise Server delivers high levels of performance even on relatively low-end commodity servers,” said Parodi.

Above all, the solution delivers the level of business continuity and resilience that Ansaldo STS and its clients demand. The clustering technologies in the Oracle\* and MySQL\* databases, combined with the DRBD live replication functionalities in SUSE Linux Enterprise Server, ensure that clusters can be restored quickly and with no data loss in the event of a failure.

“The ability to provide safe, efficient rail automation is the key to our business,” said Parodi. “With this solution from Novell, Oracle and IBM, we can provide the solutions our clients need to manage their railways effectively.”



### For More Information:

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