CREATING BUSINESS VALUE WITH AN INTER-COMPANY DATA LAKE

Information Professionals GmbH
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Who Needs an Inter-Company Data Lake?
Service Industry Association

Overview

Service Industry Association (SIA) was founded in 1985 as NCSN (National Computer Service Network) as the leading trade association for companies engaged in the repair of electronic hardware and in support of the high tech service industry. The association was formed to provide business-to-business network to promote partnerships between member companies. The name was changed in 1999 to reflect the association’s scope and global reach. Today, SIA members include companies from the Americas, Europe, and APAC that support the high technology service supply chain.

Throughout its history, SIA has been instrumental in fighting for the rights of high technology end users. Initiatives have included: the Right to Repair Act (now part of the Digital Millennium Copyright Act established in 1998), friend of the court briefs, white papers and complaints filed with the Department of Justice to the United States, European Council, and Canadian Commission in support of open and competitive service. SIA also supports Digital Right To Repair with legislation pending in four states.
Technogroup: a Typical SIA Member

Maintenance

With a Technogroup maintenance contract, you protect yourself against unplanned additional costs for repairs, support and maintenance, which exceed your budget and can threaten the financing of projects relevant to security.

From hardware maintenance and repairs to telephone support and system monitoring, you get everything you need for a smooth data centre. Thereby, your systems are excellently secured.

Server

The Technogroup maintenance contract for hardware combines proactive system maintenance using the Technogroup RemoteTool and direct access to the expertise of the Technogroup knowledge database. This service is complemented by the Auto-Call-System AHS Baseline, which informs the Technogroup control centre about hardware failures of server units. Thereby, a Technogroup technician fixes the error with the right components before you even noticed the error yourself. Using our service, you profit from an exceptional system reliability that is necessary for smooth operations.

Storage

When every minute counts, play safe with a Technogroup service contract for storage systems. The service specifically designed for business critical storage systems provides integrated support for your storage environment, the associated virtual storage manager and the application software. You can adjust the scope of the contract depending on your desired level of availability. Besides support for storage solutions in large and medium-sized companies, Technogroup offers services for SAN infrastructure of all the main manufacturers, especially in heterogeneous system environments - independent of manufacturers.

Network

A flexible business requires a flexible IT. Your LAN, WAN or SAN infrastructure is crucial for the deployment of your existing applications, processes and services. Establish a higher service level while simultaneously allowing a more reliable, secure and dependable delivery of your data to the user.

In the age of virtualisation, a dynamic administration of the network configuration is of vital importance. From SAN via LAN to the WAN infrastructure and despite of using small switches or powerful directors, the Technogroup is your professional service provider for hardware maintenance. Besides Cisco, Brocade and Adva, Technogroup supports all major network products.

IT Maintenance – Your advantage is our daily business
Dell PowerEdge 2950: A Typical Device
Business Drivers

• The changing market environment:
  – OEMs are discovering post-warranty maintenance as a profitable, stable revenue stream. Though theoretically competitors, TPM companies are increasingly cooperating in response to this threat.
  – OEMs are moving rapidly towards data-driven business. The members of SIA must respond in order to remain competitive.

• The changing technological possibilities:
  – Plummeting cost of storage and processing
  – Big Data
  – Advanced Analytics
What's Been Happening Until Now

Service Data  Cost Data  Market Data  Industry Sources  ...  Public Data Sources
SIA Big Data Project – Vision

- "Managed Data Lake"
- Analysis based on common, integrated data, using an SIA industry ontology
- Results available to all participating companies
- Secure and confidential, i.e. safe for competitors to use
- Business model to monetize available data

End Results

1. Competitive advantage for SIA members
2. Strengthen SIA's position as a voice of the industry
SIA Big Data Project – Vision
Core Benefits of Sharing Data

Insights from Industry-wide data source:

• Labor planning
• Costs assessment
• Service improvement
• Parts planning
• Risk assessment
• Churn prediction
• Predict Profitability
How Do We Do It?: Initial Architecture

Landing Area
- Raw Data
- Standardized Structure

Staging Area
- Anonymized
- Normalized Content

Common Area
- Common Data Store
- Derived Data

Event Sources
- REST API
- .xlsx
- .csv
- Query Job

Transformation

Analysis / Data Mining
Business Value: Labor Insights

Use Analytics to determine optimal labor pooling based on expected call volumes
Business Value: Labor Insights

What are the most common issues engineers are likely to find on a particular model?
Business Value: Cost Assessment

Data also reveals average onsite labor hours to plan workforce.
Business Value: Service Improvement

Which parts might be replaced before they cause problems?
Business Value: Parts Planning

Calculate **optimal levels for spare parts**.
Predict high fail items for local spare part warehousing.

**NU209 Battery: Predicted Usage**

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**NU209 Battery: Predicted Usage (by current installed base)**

![Graph showing predicted usage over time](image)
## Business Value: Risk Assessment

Recognize **problem devices** under maintenance

Call Rate Warnings: Outliers for count of CALLs in 2016 > 20

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Business Value: Churn Prediction

**Predict Churn** using both aggregate data and in-house analysis
Business Value: Predict Profitability

Use Big Data Analytics to determine \textbf{optimal profitability}

Revenue - (Labor * Hours) + (Parts * Cost) = Profitability
The SIA Big Data Project

Competitors and Partners:

1. Decide on business questions to answer collectively
2. Acquire an Advanced Analytics capacity
3. Identify appropriate data and pool it
4. Develop and deploy analysis product(s)
5. Evaluate results and set future agenda

- Share costs, risks and benefits
- Accelerate response time
- Gain Competitive Advantage