



Wherever there are networks...

Products and Services



Wherever there are networks ...

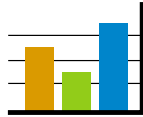
Wherever there are networks there is a need to proactively monitor and manage network services. A cost and time effective solution uses remote access hardware and software from TSB Solutions to monitor and collect events data from multi-vendor telecom equipment.



Costs



Service



Performance



Change



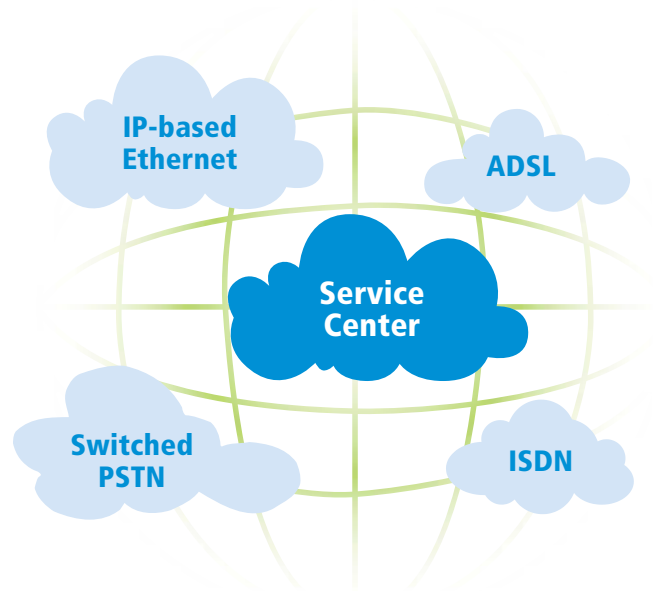
Security

Worldwide, service providers and enterprise network operators use TSB products and services to manage **costs, service, performance, change and security**.

Over 60,000 TSB Remote Element Monitors (REM's) have entered service worldwide: collecting billing data, logging site events and enabling secure remote maintenance portals for technicians.

A unique TSB strength is that the company designs the Solo hardware and develops the software that it uses to provide its service offerings. This provides great flexibility and experience to our service provider customers.

The Solo Family is the result of TSB's 25 years of experience designing and manufacturing hardware to ISO and BABT



quality standards. Solo products are compliant with European Union RoHS and WEEE environmental directives.

Hardware Solutions

Solo models are available in single port and multi-port configurations and can offer connectivity over Ethernet, ISDN, ADSL, Dialup and VPN facilities. All Solo units provide backup battery protection, scaleable memory, self-diagnostic alarms and pollable site events log. Solo units support the following security and access protocols:

- TCP/IP v4/v6, TELNET, FTP, SNMP
- IPsec, IKE, X.509, SSL, SSH
- PPP, CHAP, MSCHAP, PAP, PPPoE
- XModem, YModem, ZModem



Solo Multiport is a powerful 5-port + DTE, multi-application, multi-user unit that provides contact closures, digital inputs, dual Ethernet + v.92 modem connectivity and optional hard drive.

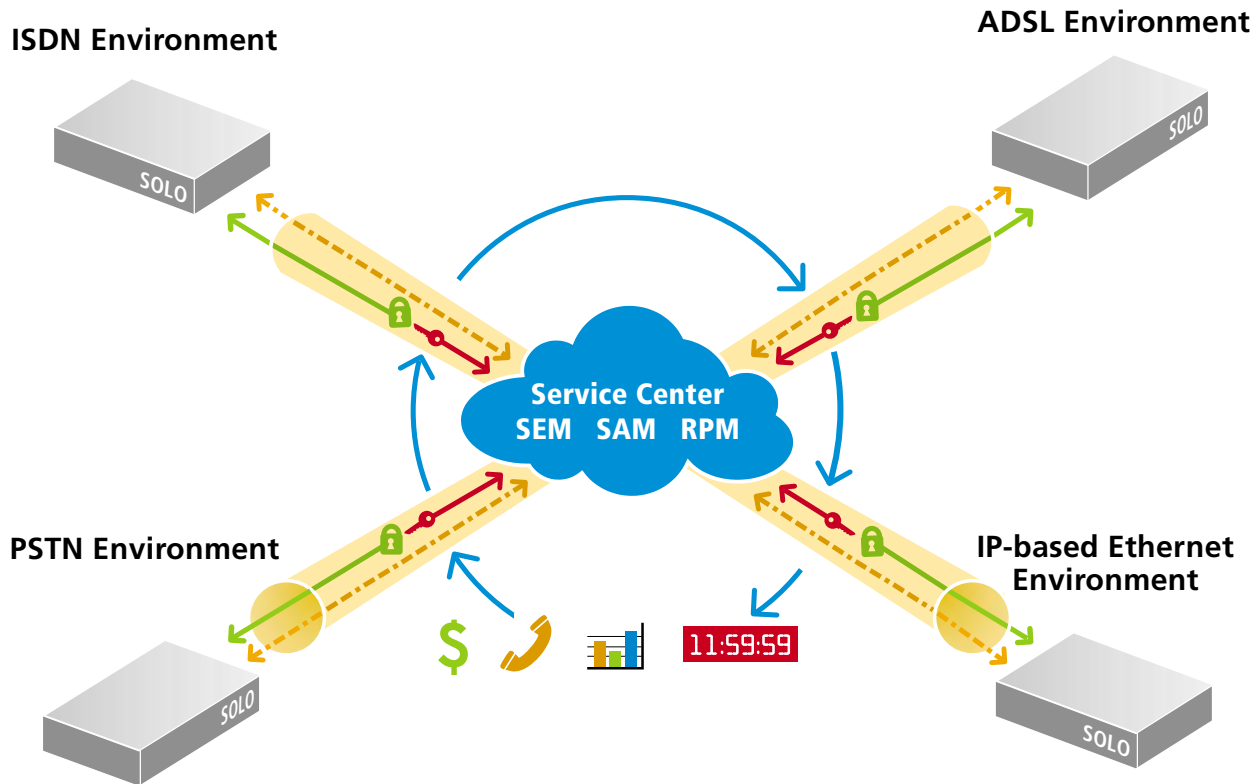
Solo TRIO is a powerful, cost-effective 3 port + DTE, multi-application, multi-user unit for installations where contacts and digital inputs are not required. Solo TRIO provides dual Ethernet + v.92 modem connectivity.



Solo Jr is a powerful single port + DTE unit for single application monitoring and access. It provides Ethernet + v.92 modem connectivity.

Software Solutions

TSB software solutions provide multi-vendor support, centralized configuration, secured access, automated events data collection and site administration for all remote Solo hardware units. TSB applications operate in the Sun Solaris environment and are scalable to accommodate an unlimited number of sites.



Site Events Manager (SEM)

SEM enables Solo site configuration and remote diagnostics including alarm profile definitions and software library update downloads. SEM automates all the routine activities associated with network management such as:

- alarm monitoring and trouble tickets
- secured "tunnel" access
- escalation and forwarding
- scheduled polling of CDR, alarms, traffic and site
- configuration data
- automated batch file transfer to arms length processing applications such as RPM, call accounting and security

Security Access Manager (SAM)

SAM enables and administers the multi-level security profiles that can be implemented as a feature of Solo site security. SAM can accommodate an unlimited number of user security profiles. SAM controls who gets in and what they can access, providing a detailed audit trail of all activities.

Remote Performance Metrics (RPM)

RPM employs Oracle RDBMS to generate site and network Reports based on Solo site events, traffic and performance data. RPM

produces graphic Site and League reports that rank sites by number of alarms and alarm-type occurrences. RPM also reports facility/route utilization, and feature, port and CPU utilization. Reports can be published or posted in PDF or HTML.



Hosted Services

TSB opened for business in 1981 as a Telecommunications Service Bureau and services are still a cornerstone of our business. Our services keep evolving to keep pace with developments such as VoIP.

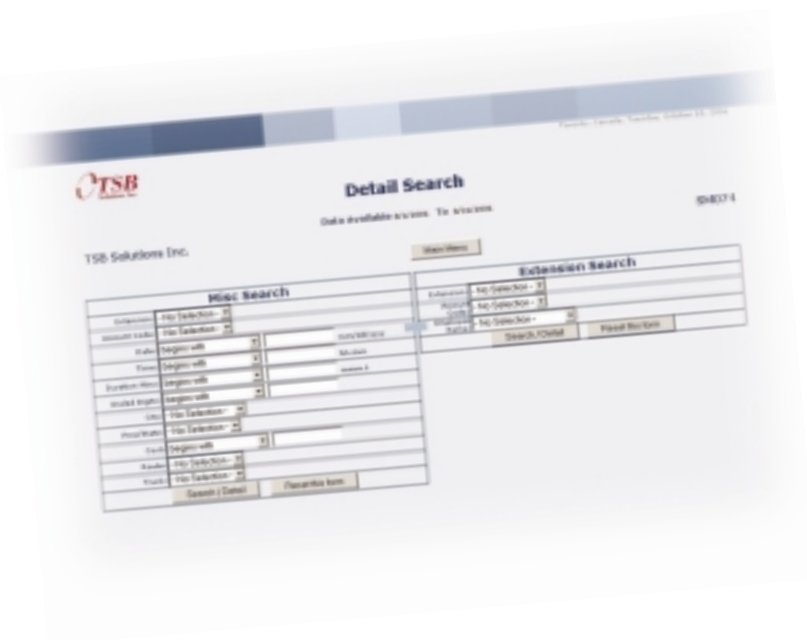
CallCheck

CallCheck is TSB's Call Accounting service. On a nightly basis we collect and process tens-of-millions of call records and allocate costs by extension and business unit in corporate cost management reports. We provide printed reports, processed call records and load input to general ledger applications.



IS Online

IS Online is TSB's internet-based Call Accounting service. Users access and query their processed billing and usage data and can export it to desktop PC applications. Traditional allocation and usage reports are available in PDF format.



NetFrame

NetFrame provides managers with network alarms, traffic, performance and configuration reports from the RPM application without any investment in tools, time, facilities or expertise. These reports help optimize traffic and service levels, balancing demand and capacity.



Alarm Monitor Notification

Alarm Monitor Notification is a turnkey 24X7 service that detects and forwards critical equipment, security and environmental alarms in real time. Alarms are reported to TSB's service bureau and immediately forwarded to customers or designated service providers via e-mail, pager or ftp. The service supports distributed customer networks and sites can be configured with individual reporting parameters.

Wherever there are networks, TSB Solutions hardware, software and services are benchmarks in telecommunications management.

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