Enghouse
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Proteus Enterprise and Trader

Product Overview

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Change Control

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Business Intelligence for Corporate Communications Systems

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Proteus is an internationally recognised corporate application for analysing communications systems, providing billing data and identifying telecoms fraud. Proteus is used widely within the mid to large corporate sector, with a specialisation within the financial trading market. It has been helping companies manage communications costs, systems growth and systems migrations for four decades.

Proteus includes support for call detail record (CDR) imports from over 100 Unified Communications (UC), IP and TDM communications systems, plus analysis of quality of service (QoS) data for selected IP PBX. Additionally, Proteus Trader is the only communications analysis application that combines trading platform and PBX data in one database for single-view reporting. Designed specifically for investment banks and trading companies, it simultaneously monitors voice data on private wires and turrets, and combines this with PBX data for a 360° view of the organisation's communications.

Companies operating across multiple sites and PBXs, including international organisations, are able to consolidate data into a single, centralised system, providing business intelligence across all communications systems from one platform. The information and data analysis provided by Proteus benefits multiple people within an organisation:

- C-level: company-wide summary reporting breaking down costs, capacity analysis, and key performance indicators.

- Finance teams: automated cost allocation reports, billing reports for service companies, ability to validate supplier invoices, manage business and personal call.

- IT and Telecoms teams: manage network capacity, set alarms for risk or non-compliance, detect fraudulent activity, measure quality of service, quickly identify faults.

- Sales, Marketing and Support teams: measure team KPIs, highlight where and when resources should be deployed, track the effectiveness of sales and marketing plans, measure volume of out-of-hours calls.

- Compliance officers: monitor telephony compliance across multiple business rules including system capacity and allowed and prohibited call destinations.

- All employees: track personal call usage.

Core Communications Analysis Capabilities

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Telecoms Cost Optimization

Using the Proteus dashboard and reports users can perform real-time and historic cost analysis, compare rate plans across carriers, set cost-based alert triggers and identify unused or underutilised assets for decommissioning.

Cost Allocation

Proteus's reports are extensively used for cost allocation across a company's departments or cost centres. This process can be automatically scheduled to run periodically, e.g. monthly.

Network Optimization

Using the Proteus dashboard and reports users can perform analysis of network and trunk utilisation to identify peak capacity levels and times; monitor the effectiveness of call routing plans; identify abandoned call volumes and agent utilisation; monitor media usage across voice, video, conferencing, IM, etc.; and measure quality of service across selected VoIP networks. Trunk capacity can be monitored in real-time and measured over time to ensure adequate resources are planned and implemented.

Customisable Dashboards

Comprehensive Reporting

Organisation Management

Exception Alerting and Fraud Management

Service Billing

For legal firms, managed offices, telecom operators, and other companies that require onward billing facilities, Proteus can produce branded billing reports based on usage, percentage mark-up and defined fixed costs. The reports can be scheduled and filtered to meet precise needs.

Fraud, Security and Compliance Tracking

Proteus allows for the monitoring of telecom activity to automatically identify potentially fraudulent activity, such as toll fraud and out-of-hours breakout calls, before it becomes costly. It can also be used to trigger alerts for a range of scenarios such as:

- Response time SLAs
- Call duration
- Trunk utilisation
- Frequency of calls to the same number or trader
- Emergency calls
- High cost calls
- Call destination, such as prohibited numbers or countries

Alerts can be triggered using cost, call volume, date and time, people and departments, call types, call destinations, etc. Alert outputs are also configurable, such as email, Skype IM, and SNMP.

Staff Activity Monitoring

Reports can be generated showing employee communications activity and cost and can show performance against defined key performance indicators (KPIs). The data can be visualised on a dashboard for real-time monitoring, with flexibility to create and manage dashboard views that are specific to individual needs.

Unified Communications

Unified communications platforms, such as Skype for Business and Cisco UCM, are complex to manage as they require different resources depending upon the communications channels chosen by end users. Proteus helps to manage these complex platforms by providing granular analysis of system activity. For example, Proteus is able to differentiate between voice, video, conferencing, IM and file sharing, all of which can be analysed individually or compared against each other. Analysis of Response Group call routing and utilisation is available and the ability to correlate communications activity with network quality of service is particularly helpful for system administrators and IT Managers. Additionally, measuring softphone vs. hardphone use helps identify user adoption trends.

Optional Analysis Toolset

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Real-time Monitoring

The Proteus real-time engine uses a computer telephony integration engine to collect real-time status information from the communications platform and visualises the data in dashboard format, showing data such as active calls, calls ringing and calls on hold. This information can be filtered by department, line group, switch, and many other entities in order to provide monitoring, for example, of instantaneous concurrent usage of a particular trunk group. The engine can also be used by the alerting system to provide real-time alerts and is useful for identifying calls to prohibited numbers and measuring trunk capacity in real-time.

VoIP QoS Monitoring

The VoIP QoS features are fully embedded into the Proteus application. They offer reporting on Quality of Service and call information such as jitter, latency, packet-loss, MOS, call count, average call duration and bandwidth utilization. The VoIP QoS features are available for the Cisco UCM and Skype for Business systems.

Data Import and Export Utilities

One of the most important functions of Proteus is to hold information on lines (trunks, private-wires, consoles and extensions), employees and departments. The Proteus import utility makes importing and maintaining this information easy. Data can be imported from corporate databases either by direct querying (LDAP integration) or via a CSV file. The import can also be scheduled to run automatically. The export utility allows data from the Proteus database to be exported to third party systems and databases for onward analysis and storage.

Proteus Mobile

This is a powerful embedded set of reports for identifying the effectiveness of mobile phone activity including the breakdown of voice calls, messaging and data transfers. Proteus Mobile takes its information direct from an electronic invoice, which is available from most network operators on request.

The key benefit of using Proteus Mobile is that is then allows full reporting across both mobile phone and PBX, providing a holistic view of all telecoms usage and spend.

Personal and Business Call Management

Personal and Business Call Management is a utility and set of reports that allows a company to manage personal call usage and tracking. This may be important to the company for a number of reasons, including offsetting tax against business calls and charging back personal calls to employees.

The utility allows an administrator to schedule regular email notifications to staff requesting updates to their personal call list. The administrator can automatically designate groups of numbers as business numbers, ensuring classification is carried out automatically. Personal calls are shown per employee with an associated call cost, which can be reported automatically to the accounts department.

Audit Trail

The audit trail utility tracks organisational changes over time so that accurate cost allocation can be applied even when assets have been reallocated.

PBX Manager

PBX Manager consists of a CTI interface that provides Proteus with basic PBX control features. It supports a large number of PBX. The main features of this tool are:

- Click-to-dial. This can be enabled within the Proteus online directory. Phone numbers displayed within the directory can be clicked and the user's extension will automatically dial the number selected in the directory. Click-to-dial allows users to create new calls, transfer existing calls, and append a prefix, such as 9, to external numbers.

- Scheduling handset activation. It allows administrators to define a schedule for activating handsets and deactivating handsets, based on hours of the day and days of the week. The policy is applied per PBX, with individual extension level management allowing extensions to be included or excluded from the PBX policy.

- Policy management. The Proteus alerting feature can be extended to control extension enablement or disablement. For example, an extension may be given a monthly cost allowance. If that cost is exceeded a trigger can be sent to the PBX to disable the extension.

Proteus Trader

Trader Voice

With Proteus Trader, voice activity on the trading floor can be accurately measured, including viewing usage by trader, turret, private wire and standard telephony systems. Additionally, private wire and device inventories help managers to track and manage assets, including supplier details, owners, depreciation, service plan renewals, etc.

Trader Client Database

The client database allows client details to be stored within Proteus including a campaign field for campaign name, start date and time, and end date and time. There are also summary and detail reports that show Trader calls to clients which can be organised by campaign.

Breakout Call Cost Mapper

This module is designed to alleviate cost allocation problems associated with combined trading platform and PBX environments. Normally, the cost of the call is stored against the last leg of the call sequence; hence in reports, the call's originator will show a zero cost. This module re-allocates costs back to the first leg of such calls.

Private Wire and Device Inventory

The private wire and device inventories are designed to help you save time and money by reducing the complexity of inventory management. There are a number of key benefits associated with use of the inventories including:

- Realise immediate cost savings by identifying unused and under-utilised private-wires and devices. Research has shown that on average 12% of an organisation's private-wires have zero utilisation and 15% of private-wire contracts are above current market rates.

- Ensures visibility and traceability of private-wires and devices by taking the effort out of their management.

- Includes a naming policy and user defined fields.

- Automatic notification of renewal dates.

- Data Import facility. Any type of data can be imported into the inventories from a CSV file. Proteus reports can be used on-demand are via scheduling to conduct regular inventory reviews.

- The inventory can be exported to a CSV file for use elsewhere. Data in the CSV file can be amended, removed, or new data can be inserted, and the inventory can then be refreshed by importing the updated CSV file.

- A number of standard reports are available for inventory reporting and the custom report tool also supports inventory reporting.

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Managed Services

Enghouse offers a range of managed service options for Proteus customers. Why not utilise the extensive experience and knowledge of our professional services team to optimise the value you gain from Proteus? Our consultants are able to provide system planning, system health check and fully managed services for the Proteus products. This can be for on-premise or hosted systems. Advise and management can cover the following areas:

- Telecommunication cost reduction
- Best practices
- Tariff comparison and bill verification
- Cost allocation and billing schemes
- Customer responsiveness
- Network utilisation and capacity measurement
- Management of Proteus on your behalf
- Hosting and management of Proteus in an Enghouse Tier 1 data centre on your behalf

Support Services

Enghouse Interactive's product support services include:

- Choice of support contracts
- Dedicated helpdesk engineers
- Remote diagnostics, for seamless telephone and email support
- A global team of support specialists
- A specialised team of project managers
- Comprehensive range of value added-services

Tariff Support

Keeping track of the best deals amid the complex and ever-changing variety of tariffs is very time consuming. Tariff support is a value-added service that updates the tariff information on the customer's Proteus system thereby ensuring that customers can easily, and accurately, allocate costs, verify bills and compare carriers. Tariffs, whether standard or customised, can be added, removed or modified remotely, making maintenance quick, cost-effective and hassle-free.

Product Training

Enghouse Interactive offers standard and advanced training courses on its products and related software, delivering them either on the customer's premises using their live system or at Enghouse Interactive's in-house training centre. Investment in training ensures that customers gain maximum benefit from Proteus' features and facilities.

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Analysis Toolset

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- **Optimised database:** The Proteus database is optimised to return data queries extremely quickly and is able to manage large datasets very efficiently, providing users with fast and easy access to data.

- **Customisable dashboards:** dashboards and dashboard widgets can be customised to specific needs, or created from scratch, and allow data drill-down for greater levels of detail. They are used to provide instant visual access to important datasets, which can be presented using number, graph and grid-style widgets. Data is refreshed every few seconds to provide near real time analysis. If licensed, real-time data, such as calls ringing.

- **Standard reports:** over 70 standard report templates are available, with individual customisation possible through the report wizard. Report categories include cost analysis including billing and cost allocation by department, cost centre, employee and switch; call volume and traffic summaries, unanswered call details; call details by destination, duration and cost.

- **Customisable report framework:** this tool allows users to create reports from scratch via any combination of database fields. Summary, detail and

cross-tab reporting is possible. Report creation includes selecting the fields of interest, defining column headings and their order, defining the sort order, and defining any operations required on selected fields such as summation or counting. Output formats supported include Excel, PDF, Word, and HTML. The framework is intended for more advanced users.

- **Multiple data sources:** Proteus by default analyses CDR data, but is also able to process call management records (CMR) to provide quality of service information and CTI data for real-time system analysis.

- **Import and export:** departmental and people information can be synchronised with external LDAP sources and data exported in a range of formats such as ODBC, Excel, CSV, RTF, DOC and PDF.

- **Trends and forecasting:** cost savings can be realised by identifying and eliminating unused assets, whilst business continuity can be maintained by ensuring adequate resources are available now and into the future.

Return on Investment

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If you are installing a call accounting application for the first time, the return on investment is generally very short, often within four months, as you identify unused assets that can be ceased and areas of high expenditure that can be brought done. Thereafter, Proteus is used to manage expenditure, ensuring carrier invoices are accurate (carrier bill validation reports), identifying trends in call types and comparing rates from different carriers to optimise costs, and analysing mobile call costs, which can often be the most expensive form of communication.

Migration Planning and Investment Optimisation

Businesses have used Proteus extensively for building business cases for transitioning from one communications technology to another, such as TDM to VoIP, or VoIP to Unified Communications. This can include identifying existing assets, determining who uses what and therefore what impact the transition will have, and identifying areas of risk. Cost analysis also plays an important part in this process, for example by comparing different carrier rates for ISDN and SIP trunks. On-going cost analysis helps to measure the success of the migration.

Carrier Rate Comparison

Businesses expanding into new markets and regions will incur additional communications costs and Proteus can be used to model call costs across multiple suppliers for specific destinations, allowing an informed choice of supplier to be made.

Analysis of Highest Costs and Usage

Cost analysis is carried out in real-time because Proteus has its own costing engine. This is beneficial because you do not need to wait until the month end to receive your invoice from your carrier only to find unbudgeted costs in it. Proteus can warn you immediately there is an unusual costly event, allowing you to proactively manage this, whether it be fraud or allowable expenditure.

Cost Recovery

For businesses operating in the services, legal and managed office industries the ability to calculate and produce billing reports within Proteus allows for the recovery of costs, often with margin calculated automatically. The personal call monitoring can also be used to recover costs internally through payroll deductions or similar.

Mobile Invoice Analysis

Mobile phones are often the most expensive forms of communication, particularly where staff travel internationally. Proteus allows for the import of electronic invoices and then has a specific set of reports that can be used to analyse costs, from roaming costs to highest cost staff.

Trunk Capacity Management

No business wants to spend more than it needs to on trunk capacity, but conversely it is important to ensure adequate capacity to allow the business to offer its customers a high level of service. Measuring trunk capacity, particularly peaks and troughs over time, is an ideal way to optimise expenditure on trunk capacity.

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Supported Systems

Proteus supports the CDR specification of over 100 types of PBX, UC platforms and trading systems. These include the following. The list is not exhaustive!

PBX System Vendors

3Com, Alcatel, Asterisk, Avaya, Cisco, Ericsson, Goldstar, Hicom, Mitel, NEC, Panasonic, Samsung, ShoreTel, Tandberg, Toshiba, Unify (Siemens)

UC Platforms

BroadWorks, Cisco, Metaswitch, Skype for Business, Skype for Business Online
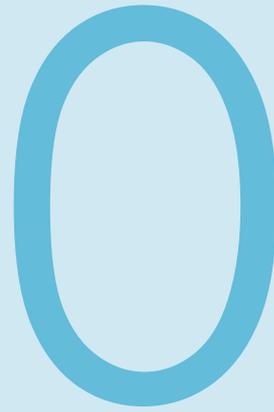
Trading Platforms

BT ITS Lync, BT Session Manager, Etrali, IP Trade, IPC Alliance, IPC Unigy, Speakerbus, Unify

Proteus is a lightweight application requiring minimal hardware and is supported on both physical and virtualised platforms. The underlying operating environment is Windows-based and utilises Microsoft SQL Server and Microsoft Internet Information Server (IIS) as core components. Additionally, the reporting framework is based upon Crystal Reports.

The user interface is a fully responsive HTML 5 site that is optimised for rendering on smartphones, tablets and desktops.

The following table provide details of the minimum required hardware. For specific system requirements please refer to your Account Manager.

Hardware and Software Requirements

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HARDWARE		SOFTWARE	
CPU	MINIMUM OF 2-CORE (OR VIRTUAL CORES) PROCESSOR – 3GHZ OR BETTER	CURRENT SUPPORTED OS PLATFORM'S	WINDOWS 10
			WINDOWS SERVER 2008 R2 STD. EDITION
			WINDOWS SERVER 2012 R2 STD. EDITION
			WINDOWS SERVER 2016 STD. EDITION
INTERNAL MEMORY	8GB (GIGA-BYTE) OF RAM MINIMUM	WEB SERVER	IIS V7.X, OR V8.X
DISK STORAGE	120GB (GIGA-BYTE) FREE SPACE WITH ADDITIONAL 35MB PER 1,000,000 CALL RECORDS	CURRENT SUPPORTED VIRTU-ALISATION (OPTIONAL)	VMWARE VSPHERE ESXI
			MICROSOFT HYPER-V
NETWORK	CONNECTION REQUIRED	BROWSERS:	INTERNET EXPLORER V11
			GOOGLE CHROME
			EDGE
			FIREFOX
MULTIPLE PBX LOGGING	ONE LOGGING ENGINE REQUIRED PER 32 PBXS	DATABASE:	SQL SERVER 2008 R2
			SQL SERVER 2012
			SQL SERVER 2014
			SQL SERVER 2016