

## Forecast Manager

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### **EXECUTIVE SUMMARY:**

An application designed to predict future threshold breaches and capacity exhaustion points by examining the patterns of historical call traffic data and extrapolating the trends beyond present day. Sufficiently advanced warning of imminently approaching overload conditions is necessary to efficiently and effectively plan network growth. The REWSS Forecast Manager can provide that advanced warning with adequate buffer time to safely avoid any disaster scenarios. Cost efficiency of the planning groups will be optimized since they can confidently grow the network incrementally in targeted areas without wastage from prematurely allocating expensive resources.

### **THE VALUE FOR THE OPERATOR:**

The Forecast Manager provides the planners with estimations based on thresholds or capacities of key values such as link loads, CPU occupancies and trunk groups. Accurate forecasts of essential data trends are key to optimizing the expensive activity of growing the network while ensuring that service level agreements with clients are never in jeopardy.

Breaches of contractually agreed maximum blocking rates can be avoided as the peak Erlangs values during busy hours will be tracked and extrapolated so that trunk groups can be expanded in good time to prevent excessive blocking.

The network can be grown precisely and incrementally with confidence that every expenditure for additional resources will be timely, effective and justifiable. Conversely, the operator will have the assurance from a reliable forecasting tool that disaster scenarios of capacity exhaustion can be avoided through more reliable data for network planners.

### **HOW IT WORKS:**

At the end of each day, the busy hour is determined and relevant data is extracted from the databases. Since each vendor makes similar data available, albeit with different names and formats, REWSS transforms all similar vendor-specific data to a common structure and format and stores it separately in shared database tables. This approach makes the Forecast Manager vendor independent.

Once stored in a common structure and format, all historical data for any network element regardless of vendor can be plugged into a polynomial equation to extrapolate the next plot points. Operators can define some of the constraints to the calculation as needed. For example, the calculation can be constrained so that only the busy hour data for specific weekdays shall be used as the basis of the forecast or perhaps applying an averaging effect over several weekly busy hours.

The variety of interfaces available for users to access the data includes a Web based GUI with dynamic reports and charts as well as daily spreadsheets available for subscription which can be delivered via email directly to the user's inbox. Several reports are made available ranging from total trunk groups and/or resources on the switch sorted by earliest to exhaust, to trunk groups and/or resource usage patterns making seasonal trending easily identifiable.

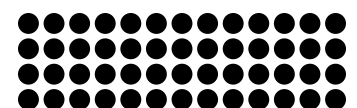
### **RETURN OF INVESTMENT:**

Reliable forecasting based upon actual and recent data patterns will greatly improve the accuracy of the network planners in making decisions to grow the network. Financial investments in additional resources will pay dividends sooner while costly miscalculations can be avoided when estimating timelines for resource exhaustion.

Even tracking certain switch resources like end office trunk groups that operators need to keep at a higher blocking rate because of least cost call routing can easily be tracked, but in a differing method, that is to report when a trunk group's weekly busy hour falls out of a predefined threshold window.

### **CONCLUSION:**

Knowing when trunk groups, links, or CPU loads are going to reach their capacity limit is essential information for any operator to have. But having this data from a reliable source and always in sufficient time to avoid disastrous overload scenarios is invaluable. For large networks with rapid growth in a competitive market, the Forecast Manager from REWSS is a must have application.



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