Providing Revenue Assurance Through QoS-Based Billing

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Agenda

- **Introduction**
- Service Assurance - How it Fits In
- Revenue Assurance as a Priority
- Revenue Assurance and QoS-based Billing
  - The Revenue Leakage Calculator
- The QoS Billing Solution
- Summary

What is QoS-based Billing?

QoS-based Billing is an OSS solution set that:

- Incorporates service level parameters in a customer's bill
- Provides value by accelerating the collection process
- Minimizes billing disputes through service delivery validation using SLA commitments

Why the focus on QoS-based Billing?

- QoS-based Billing is directly targetted at improving revenue-related initiatives in service providers through improved Revenue Collection
- Revenue Collection
  - Get paid more quickly; reduce the aging report
- Revenue Collection is a subset of Revenue Assurance
  - Limit revenue leakage; find revenue that should be paid

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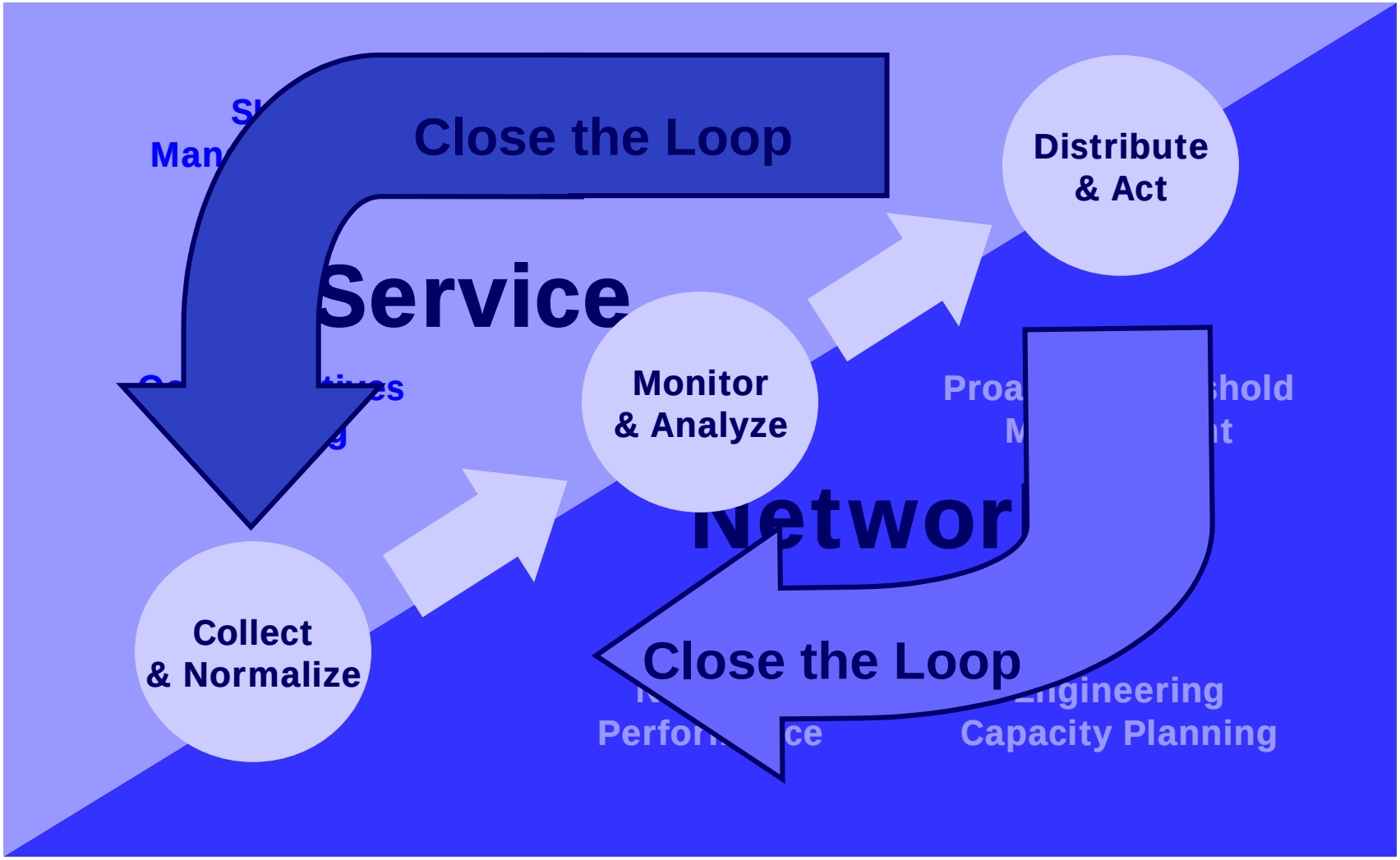
Service Assurance Defined...

Maintaining customer's services to ensure:

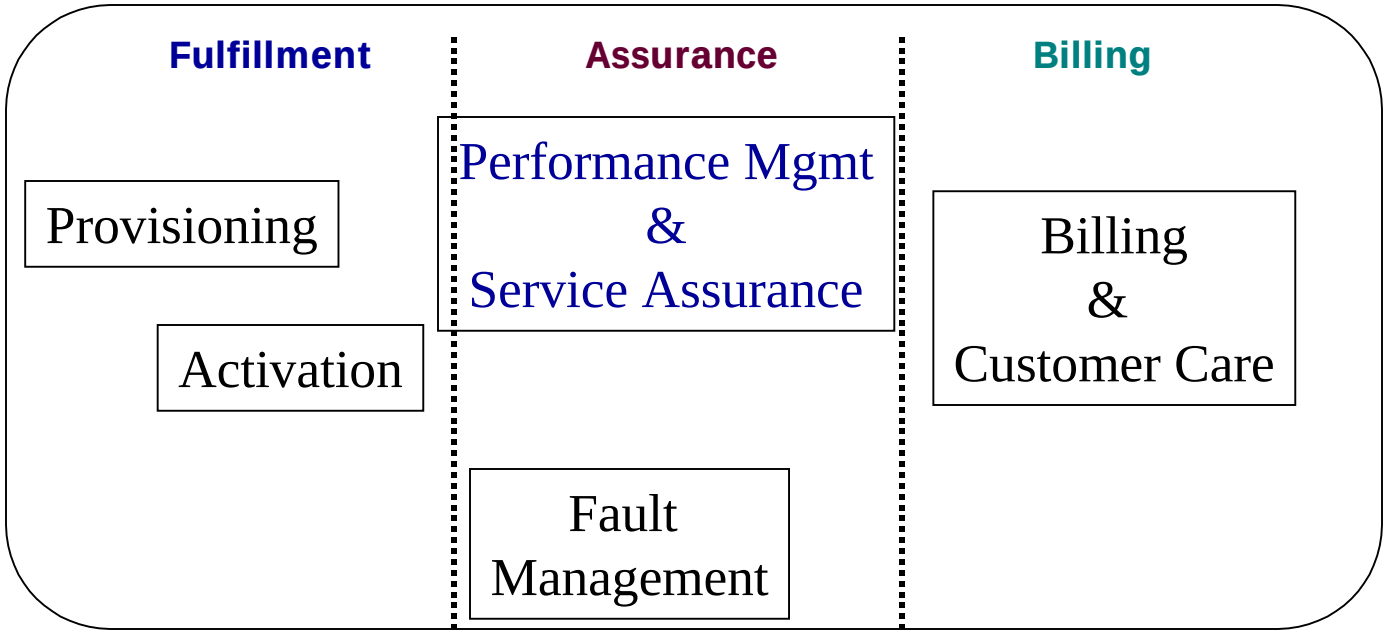
- Timely response and resolution of service and network related problems
- Service delivery is consistent
- Determine if improvements can be made
- Determine if action is required to keep service levels within agreed targets

… Bottom line, it's the ability to deliver what you said you were going to deliver!

What Does Service Assurance Mean?



The FAB Model



Key requirements of Service Assurance:

- Network Performance Management
- Service Quality Management
- Service Level Agreements

Service Assurance…Items to Consider

- Collecting & normalizing data from multiple vendors, technologies and sources
  - Cisco, Alcatel, Lucent…
  - IP, ATM, FR…
  - NMSs, SNMP, OSSs…
- Flexible reporting
  - Tailor reports to address specific business needs
  - Network performance and service performance
- Integration with other business critical systems
  - Billing, Provisioning, Inventory, Fault, etc.
- Distributed systems
  - Geographical disbursement of data sources or NOCs
- SLA Management
  - Thresholding and proactive monitoring/reporting
  - Automatic notification of violations

Why Service Assurance is so Important

Service Assurance = Revenue Assurance

- Stop REVENUE leaks
- Generate more REVENUE
- Contain Infrastructure and Resource COSTS
- Gain PROCESS Improvements

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The Revenue Assurance Priority

- Recent survey by Pricewaterhouse Coopers
  - of more than 200 telecom executives
  - representing more than 70 companies

→80% of telecom executives feel that revenue assurance is a priority

→19% of the problem of revenue leakage in service providers was attributed to network operations

→34% of the problem was attributed to billing process

PricewaterhouseCoopers, "interactive Benchmarking", 13 September 2000
Billing World, November 2000, "PwC Surveys Telecom Professionals on Revenue Assurance", Michelle Hankins

It’s Your Revenue…Are You Containing It?

Disaster if it’s Not Contained!

QoS-based Billing Value Proposition

- The integrated solution improves bill collections by linking customer bills with their agreed-to and delivered service levels by:
  - → Validating service delivery
  - → Increasing customer's confidence
  - → Avoiding customer billing disputes
  - → Managing customer's service levels

- The customer's service level is managed by:
  - – Setting realistic customer expectations and measurable SLA targets
  - – Proactive network operations through SLA warnings before customer impact
  - – Facilitating and justifying up-sell service opportunities

How is QoS-based Billing Successfully Provided?

- Successful delivery of IP Quality-of-Service requires that:
  - Complementary OSS applications be interconnected via supporting interfaces
  - Meaningful data be shared amongst these applications to deliver on the overall business processes for the service provider
  - The complementary OSS applications range from network monitoring to SLA management and fault management, and ultimately to billing

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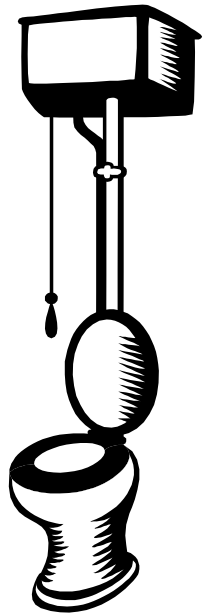
Revenue Assurance and QoS-based Billing

- The QoS-based Billing Solution can be directly applied to Revenue Assurance initiatives in the service provider

- The QoS-based Billing Solution
  - Minimizes the number of billing disputes and reduces billing dispute time, thus speeding up collections
  - Validates service delivery and confirms the SLA commitment as part of the customer's bill

How Much Revenue is Leaking?

Revenue Leakage Calculator



Revenue Leakage Example

How Much Service Level Managed Revenue is Leaking?

	% Revenue Lost	Est. Value ($M)
Total Annual QoS Based Service Revenue		$100
Losing customers due to QoS issues?	2.0%	($2.0)
SLA non-compliance rebates?	3.0%	($3.0)
Over provisioning the network?	4.0%	($4.0)
Billing disputes and extended collections?	2.0%	($2.0)
QoS investigation churn?	1.0%	($1.0)
Total Estimated Revenue Leakage	**12.0%**	**($12.0)**

Revenue Leakage Example (cont.)

Industry Opinions Say…

	% Revenue Lost	Est. Value ($M)	Industry Opinion*	Est. Value ($M)
Total Annual QoS Based Service Revenue		$100		
Losing customers due to QoS issues?	2.0%	($2.0)	7.0%	($7.0)
SLA non-compliance rebates?	3.0%	($3.0)	6.0%	($6.0)
Over provisioning the network?	4.0%	($4.0)	8.0%	($8.0)
Billing disputes & extended collections?	2.0%	($2.0)	5.0%	($5.0)
QoS investigation churn?	1.0%	($1.0)	4.0%	($4.0)
Total Estimated QoS Based Revenue Leakage	12.0%	($12.0)	30.0%	($30.0)

* CrossKeys QuiCKresults Survey - OSSWorld 2001 - New Orleans

Back to presentation

Industry Comments on Revenue Assurance*

33% are unsure of the level of leakage

- >60% were experiencing leakage of 5% to 15%
  - 11% was the average
- 56% spend less than 0.5% of revenue on Revenue Assurance
- Revenue leakage is accelerating due to:
  - Continuous reinvention of products/services to stay competitive
  - Short lifecycles as new technologies are adopted
  - Need to respond to changing customer demands

...As revenue growth slows in telecoms can Revenue Assurance be the silver bullet??

*Deloitte & Touche

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How Does the QoS-based Billing Solution Work?

- The Solution is composed of three main OSS processes:
  - Billing & Customer Care
  - Fault Management
  - SLA Management

- These processes are integrated to provide QoS-based Billing

So...

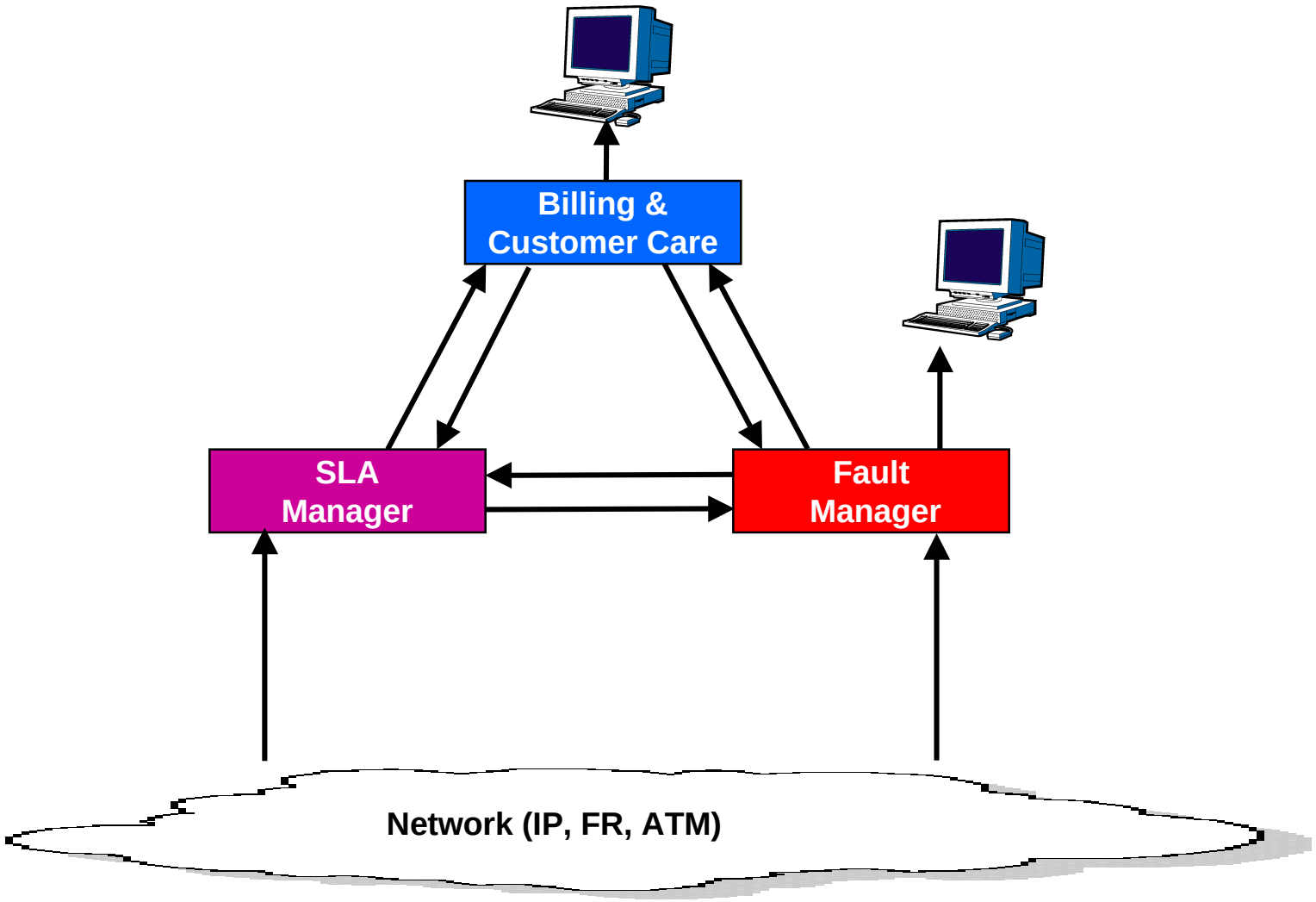
What are the roles among these three OSS functions? Who primes what?

How does the information flow amongst the processes?

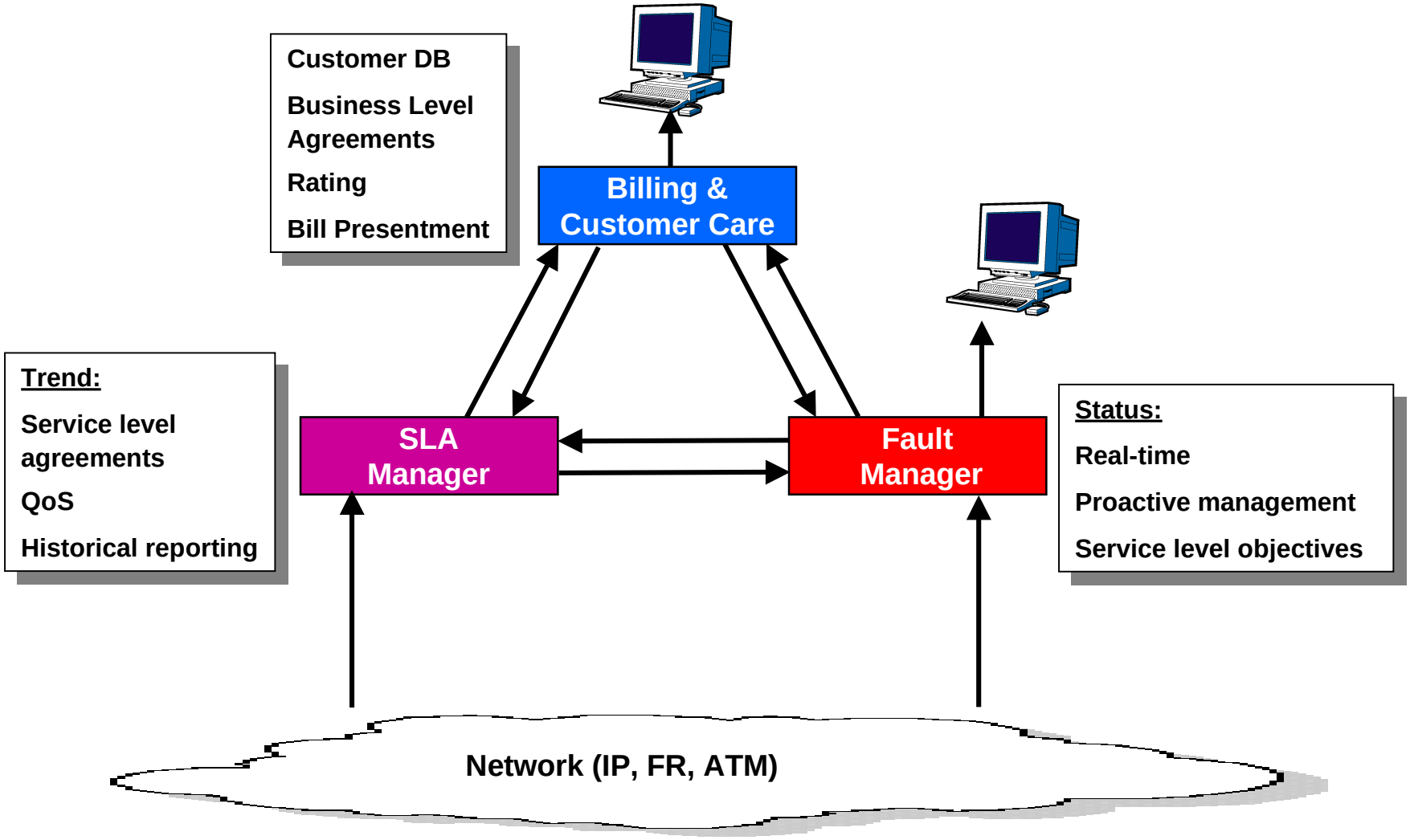
QoS-based Billing - OSS Roles

OSS	Role
Billing and Customer Care	Delivers the QoS-based billing solution – includes customer and service provisioning and administration, business level agreement ownership, rating, up-to-date account status, bill presentment.
SLA Manager	Service level agreement management and network performance - SLA warnings provided to Fault Manager for proactive network and service management, SLA violations and " upsell" opportunity events provided to Billing and Customer Care.
Fault Manager	Proactive network and service management, fault management, service level objectives based on operational status, outage events sent as rateable events to Billing and Customer Care.

QoS Billing Solution - Information Flow



QoS Billing Solution



Target Solution - Information Flow

- ✓ **Billing & Customer Care**
  - manages customer, service and business level agreement information
  - provides appropriate customer and service information to the other applications.

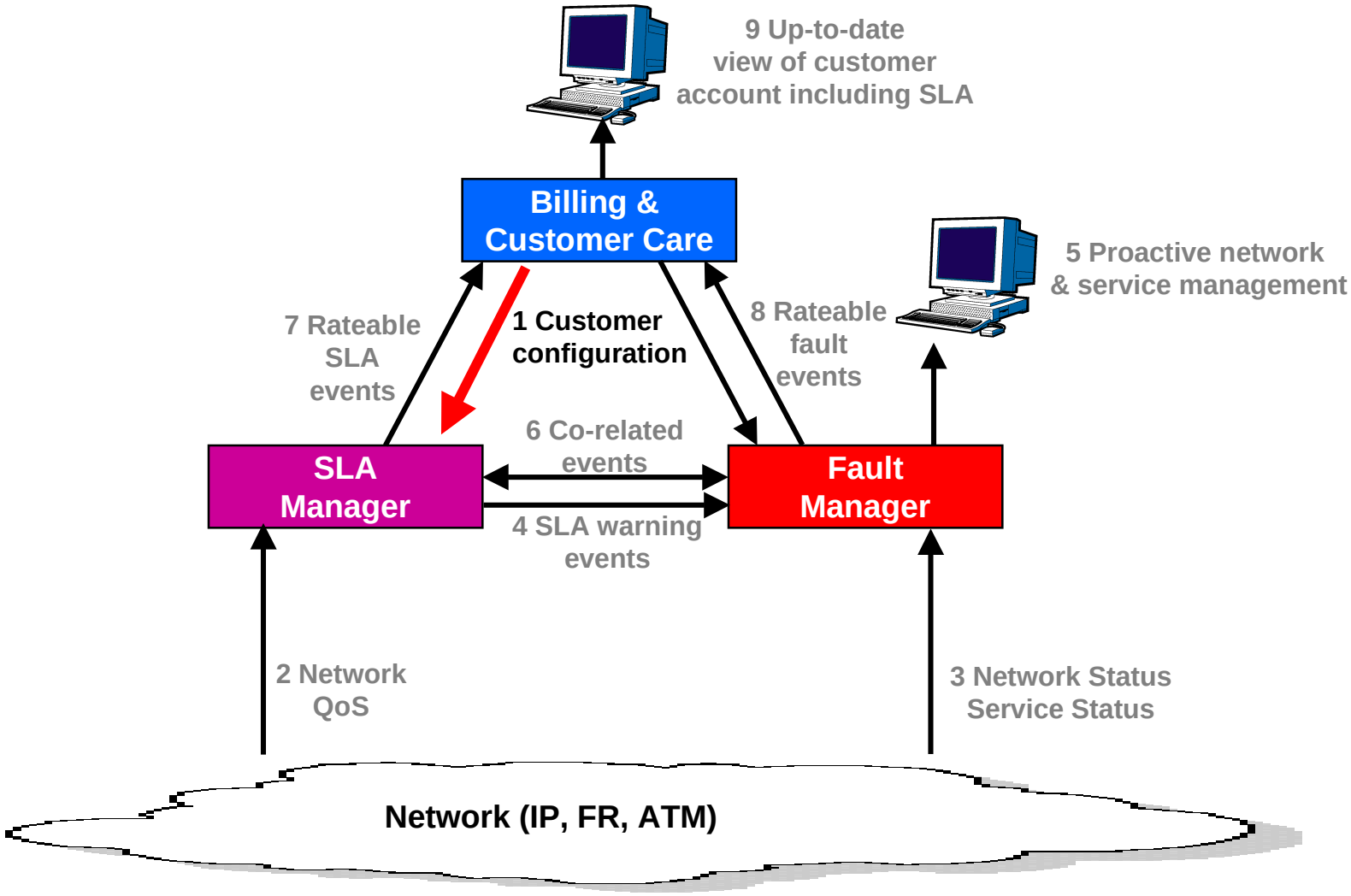
- ✓ **SLA Manager**
  - raises “near” SLA violation conditions to **Fault Manager** so that appropriate network action can be taken
  - raises SLA violation and/or exceeded events to **Billing & Customer Care** for service upsell and rating purposes.

Target Solution - Information Flow (cont)

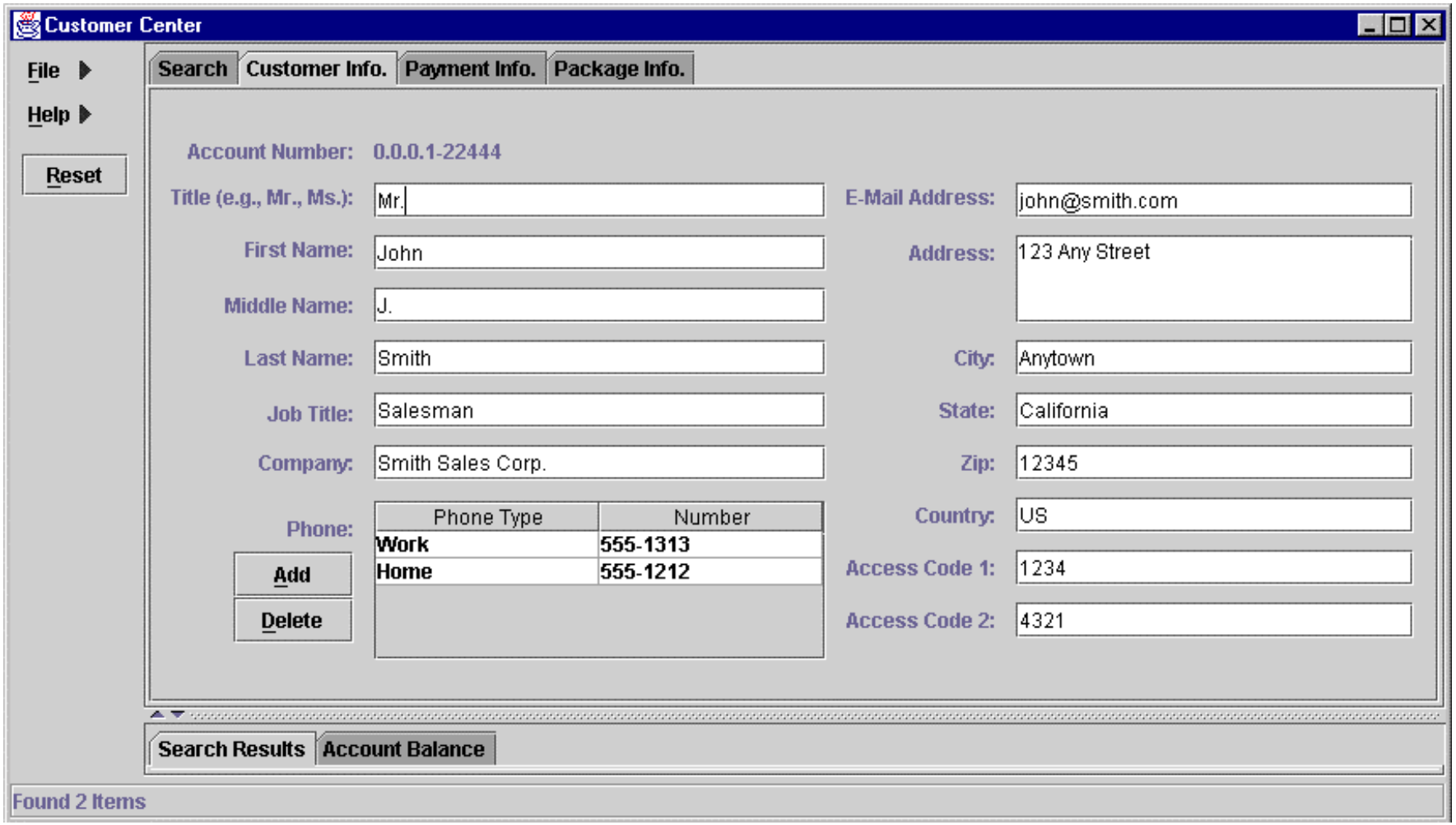
- ✓ **Fault Manager**
  - raises important events to **SLA Manager** for trending and SLA management purposes;
  - raises fault events to **Billing & Customer Care** for service rating purposes (e.g. customer-impacting service outages).

- ✓ **Billing & Customer Care**
  - presents the bill to the customer along with the SLA report or web links to complete SLA report.

Integrated Customer Service and SLA Provisioning



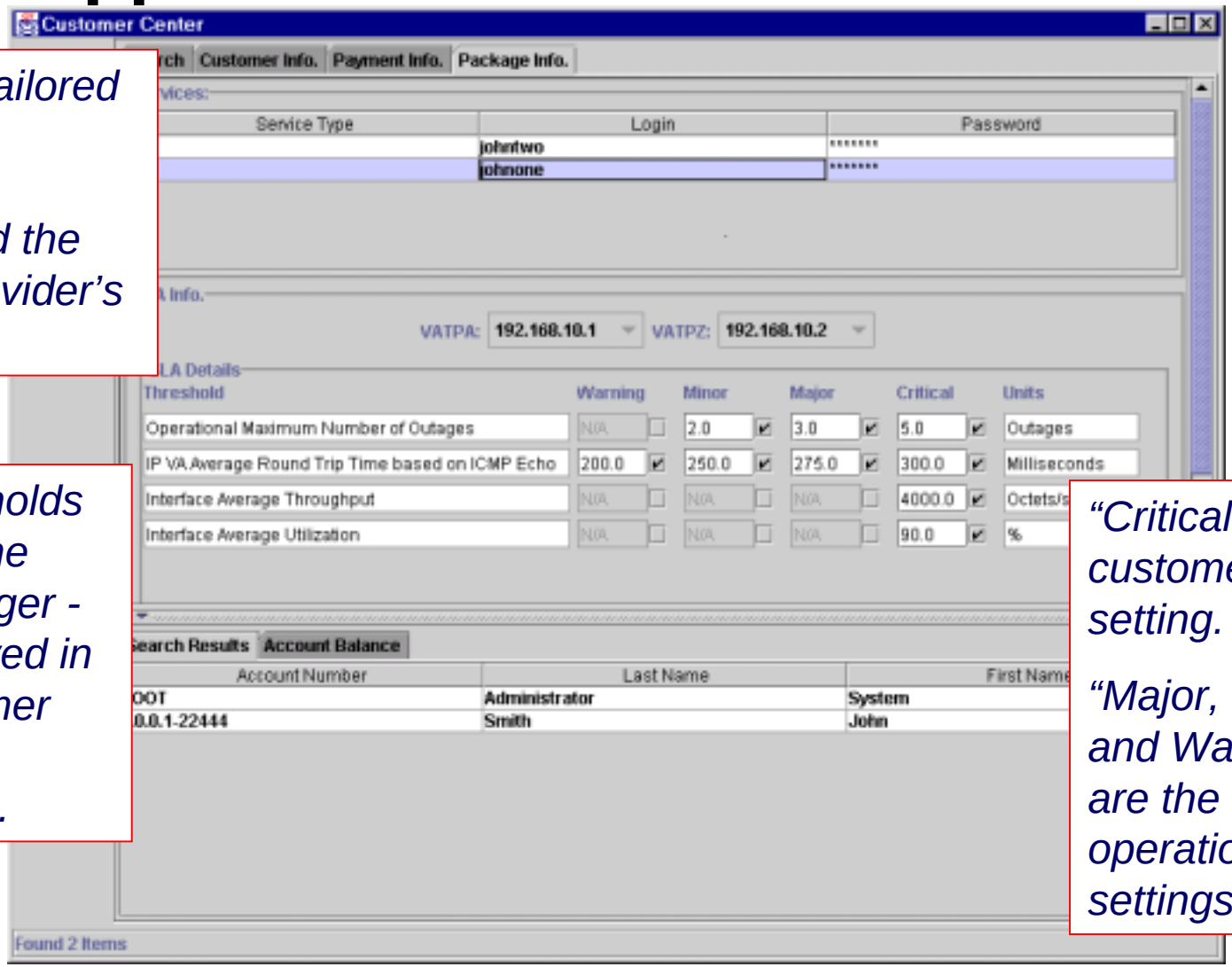
Customer Service & SLA Provisioning in Action



SLA Details Appear in the Customer Care Application

SLAs are tailored to both the customer's service and the service provider's operations.

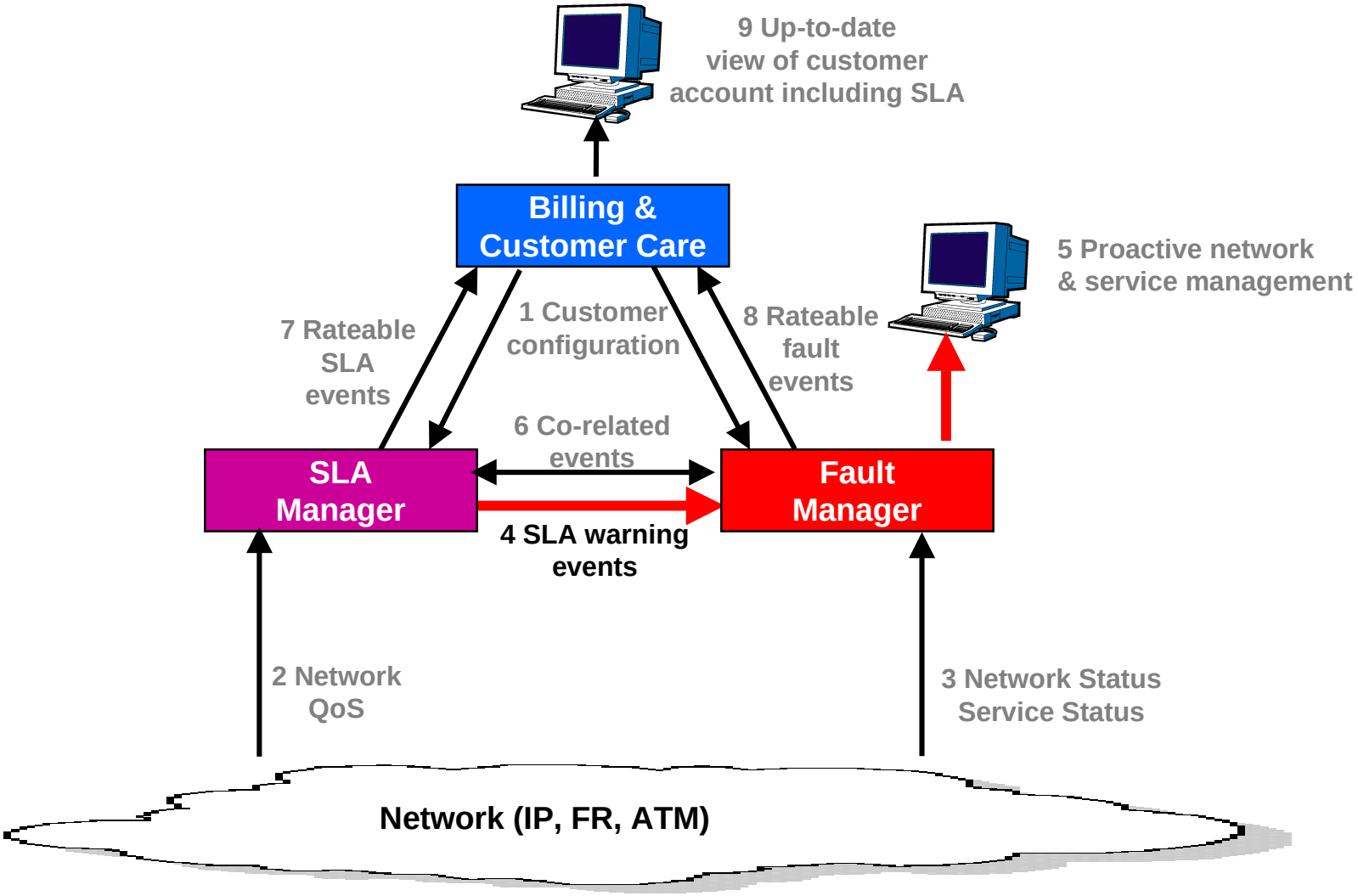
SLA thresholds stored in the SLA Manager - are displayed in the Customer Care application.



"Critical" is the customer SLA setting.

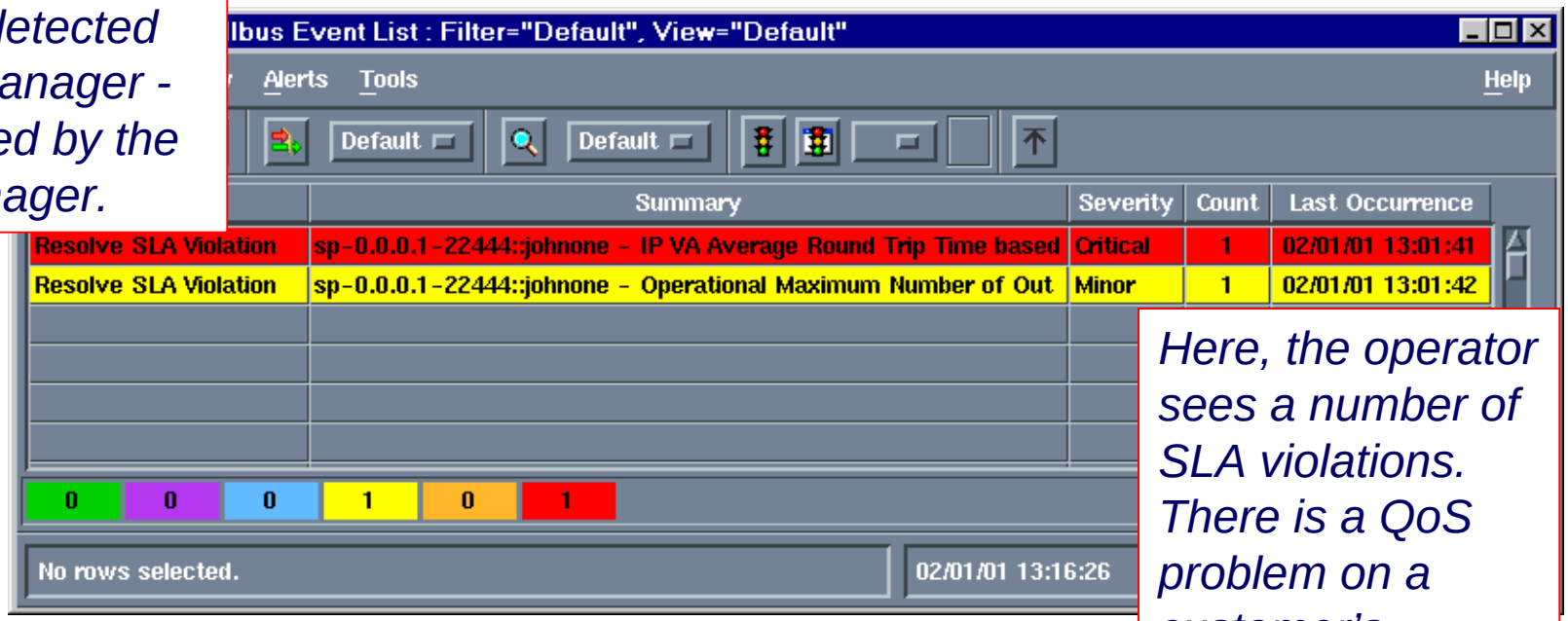
"Major, Minor, and Warning" are the operational SLA settings.

Integrated Fault Management



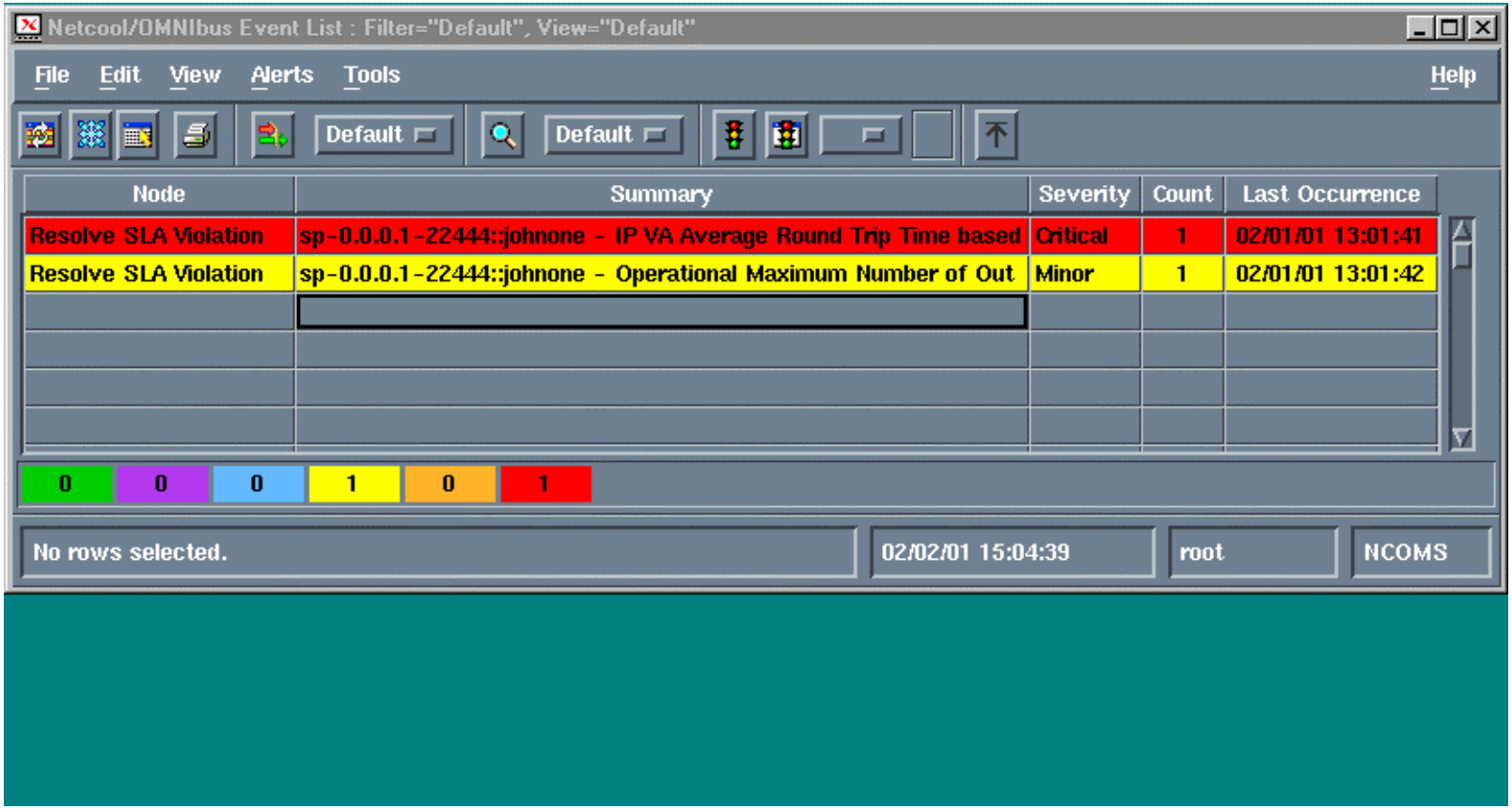
SLA Violation Warnings Appear in the Fault Manager

An SLA threshold violation detected by SLA Manager - is displayed by the Fault Manager.

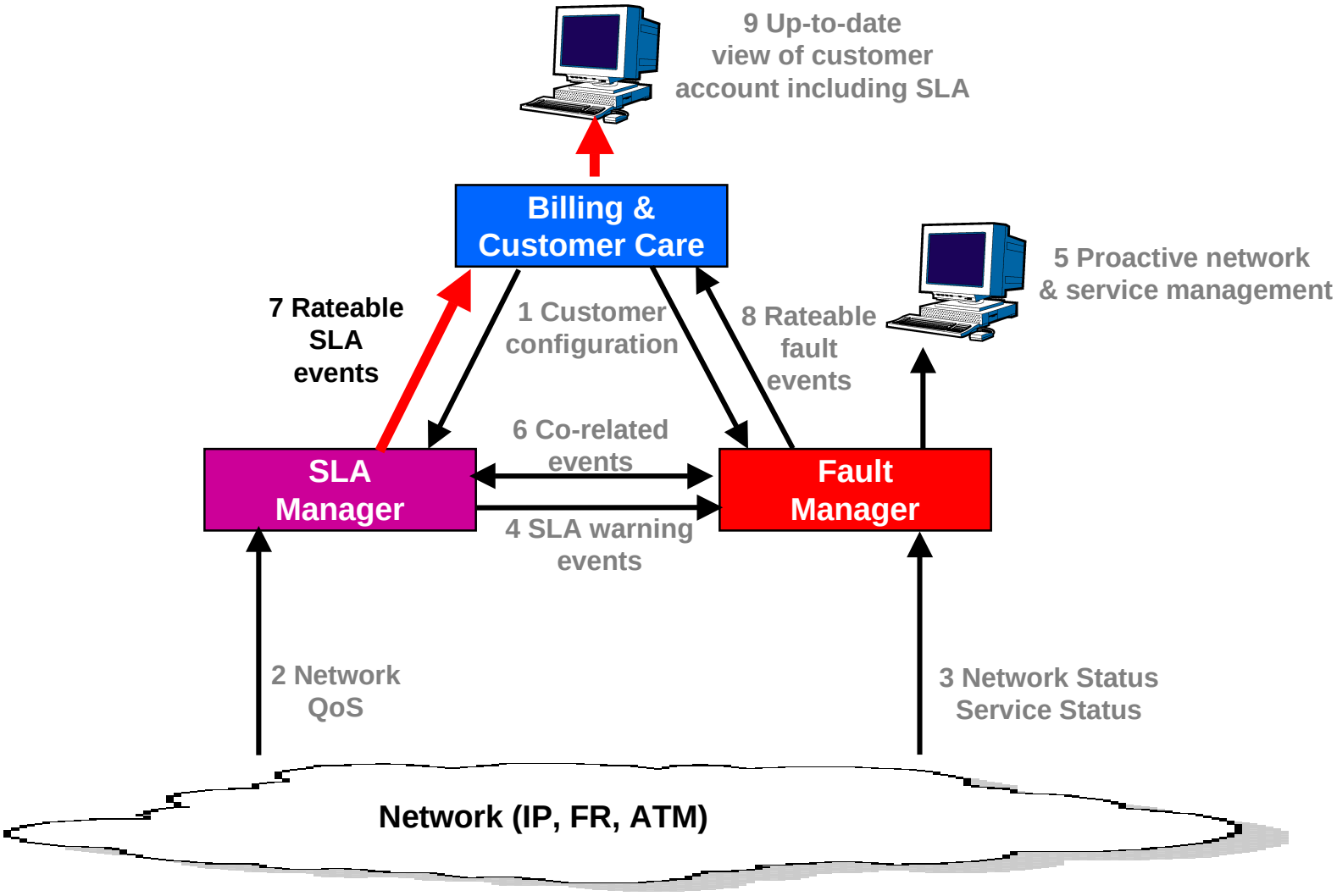


Here, the operator sees a number of SLA violations. There is a QoS problem on a customer's service - time to take action!

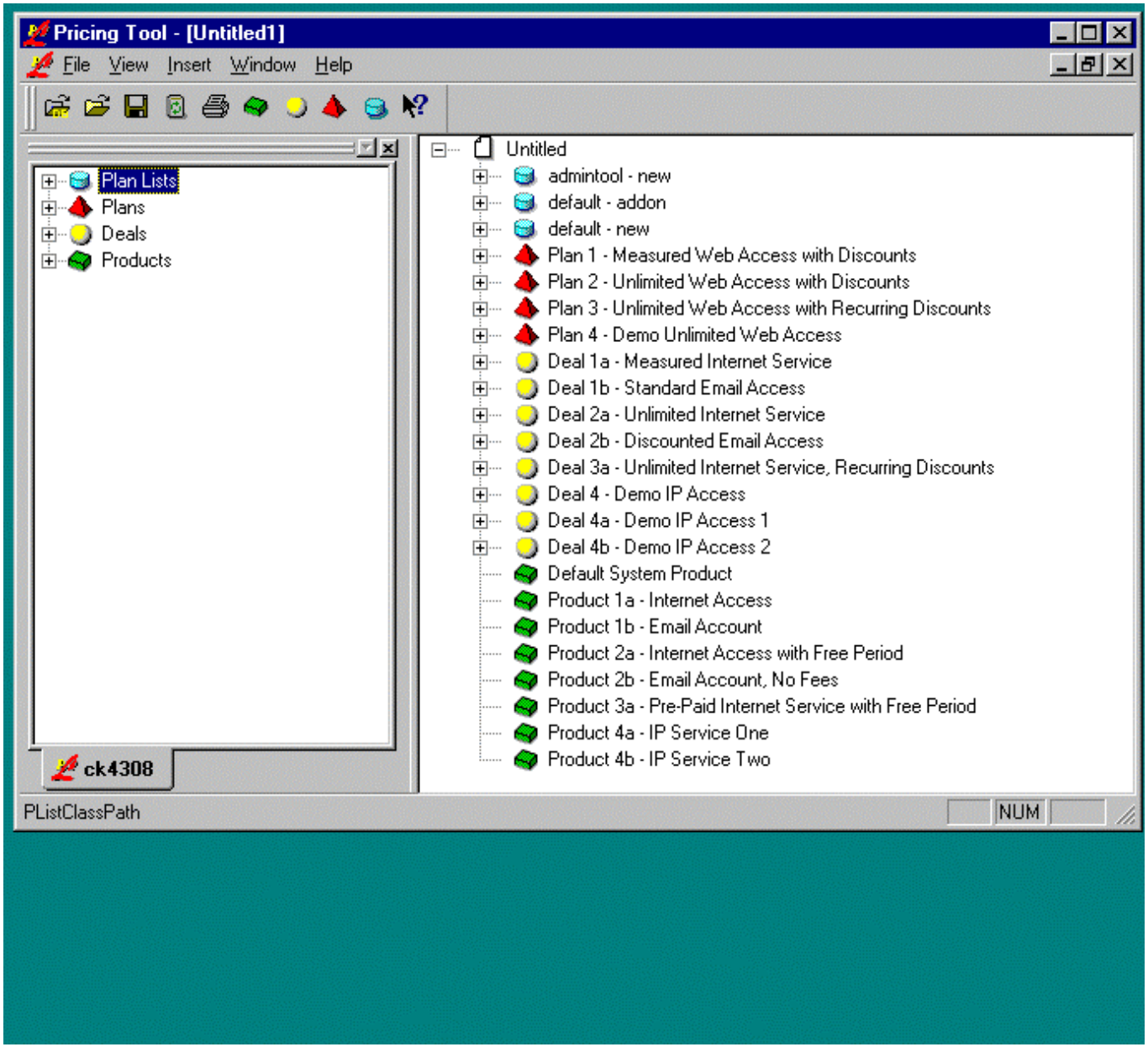
SLA Violation Warnings in Action



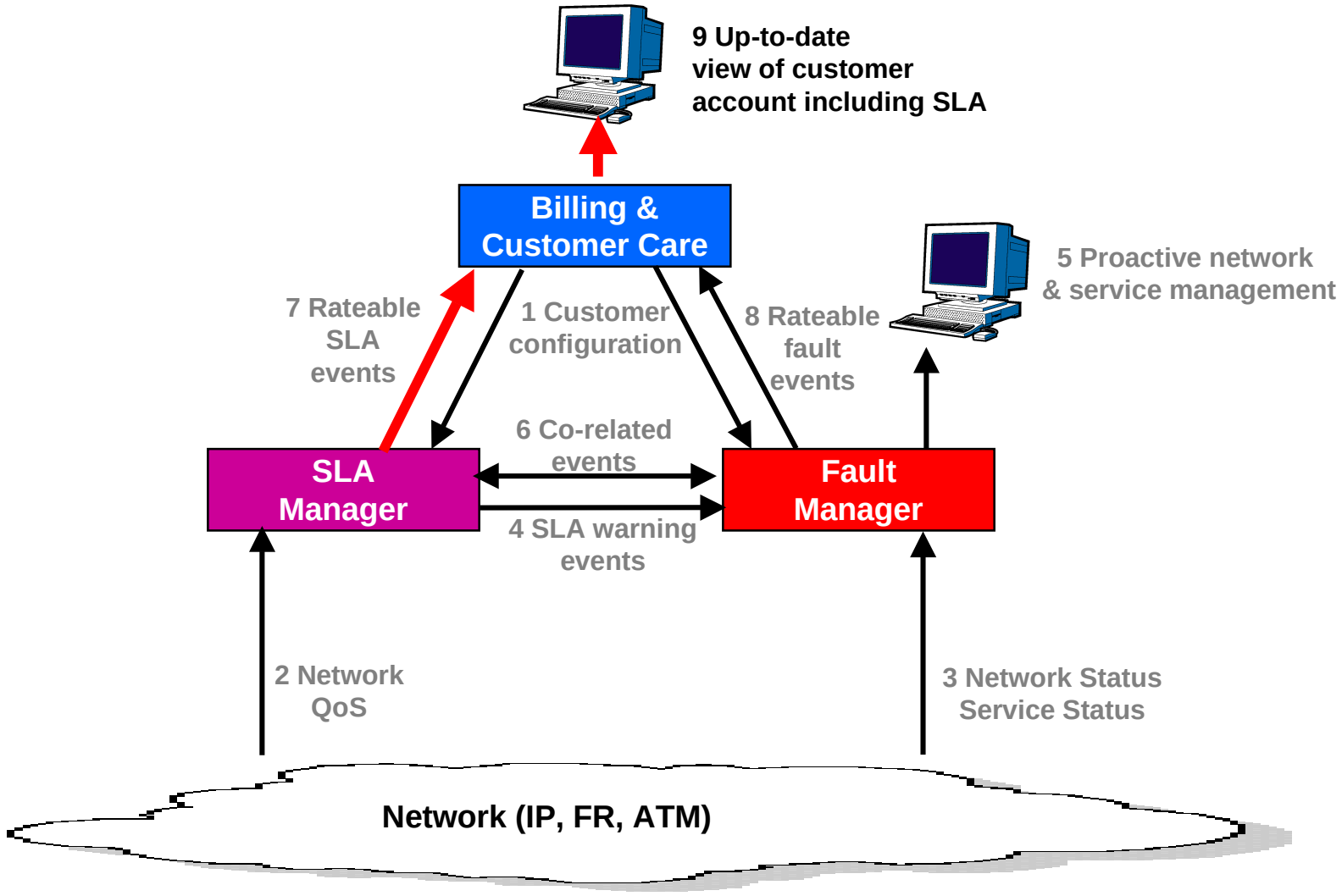
SLA Violations and Billing



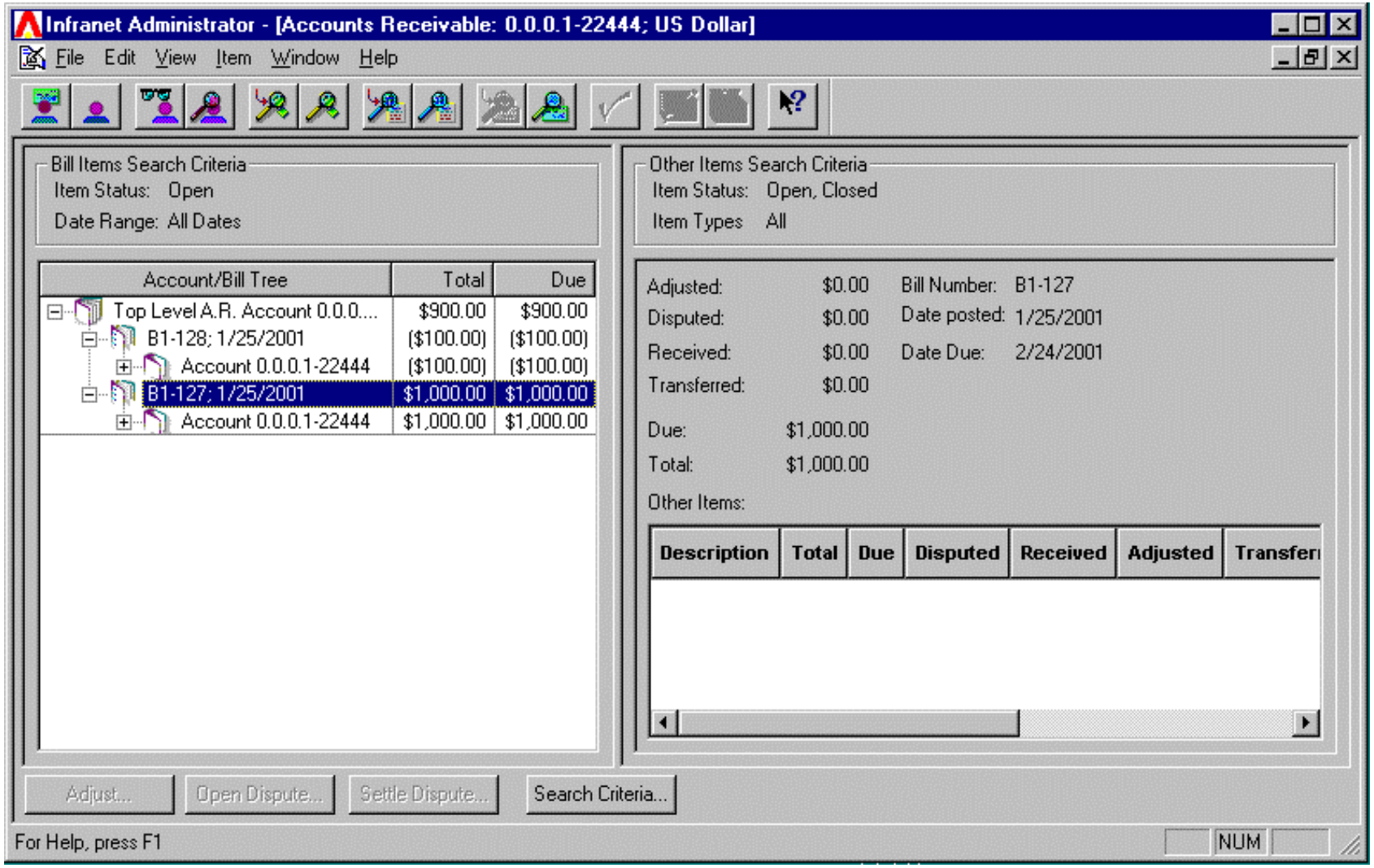
Administration of Rateable SLA Events



Back to SLA Violation Notification and Account Status...



Customer's Account is Updated in Action



Billing Presentment with SLA Metrics

The SLA objective and the SLA performance data from the SLA Manager is displayed on the customer bill.

Summary

Bill Date	Invoice Number	Account Number	Payment Due	Amount Due	Amount Enclosed
04 2000	B1-304	0.0.0.1-18576	Jan 03 2001	$50158.90	$

Billing Details

Date	Rate Description	$ Total
Dec 04 2000	My IP Services 1 Gold Level SLA -$45599/mo plus tax*	50158.90
	My IP Services 1 - Target - 5 Operational Maximum Number of Outages	
Dec 04 2000	My IP Services 1 - Delivered - 2 Operational Maximum Number of Outages	0.00
	My IP Services 1 - Target - Max. 300 ms IP VA Average Round Trip Time	
Dec 04 2000	My IP Services 1 - Delivered - 198 Milliseconds IP VA Average Round Trip Time	0.00
	My IP Services 1	

The customer sees the actual SLA performance on the bill, confirms service delivery, and approves bill payment.

Customer disputes related to service delivery are avoided, speeding up the bill payment time. Costly human intervention by the service provider is avoided.

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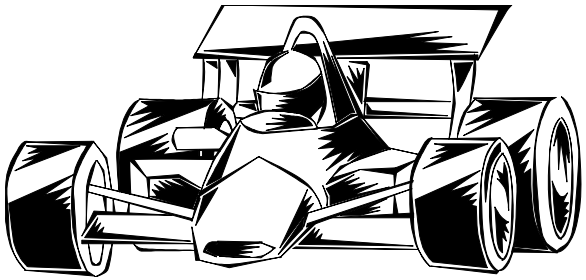
Key Value of QoS-based Billing



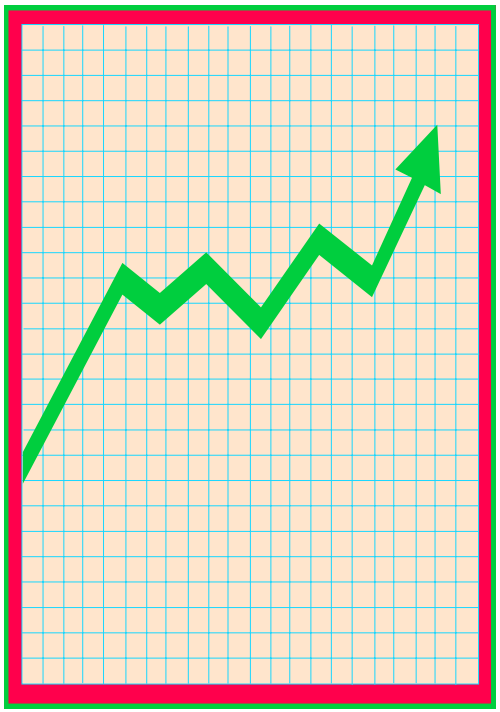
- Accelerates the collection process

- Minimizes billing disputes through service delivery validation using SLA commitments

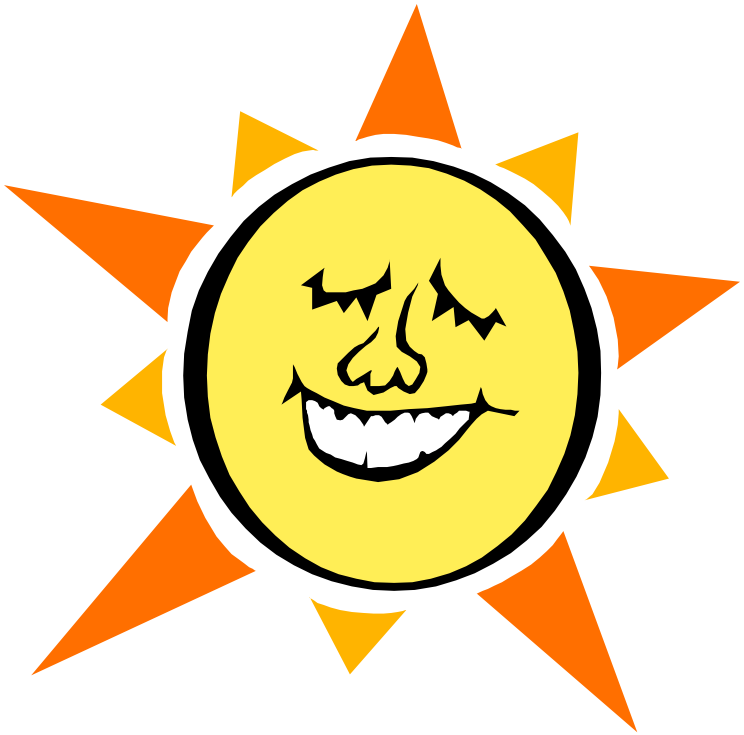
- Reduces the amount of human intervention required to respond to customer disputes

Summary

- QoS-based Billing…
  - → Directly applies to Revenue Assurance initiatives
  - → Reduces customer churn through increased customer satisfaction
  - → Provides proactive service delivery
  - → Allows delivery of differentiated services
  - → Has an attractive ROI for implementation



Thank You!



Any Questions?