

GB1059F Home Broadband Service Assurance_Questionnaire

China Mobile Group Guangdong Co., Ltd.

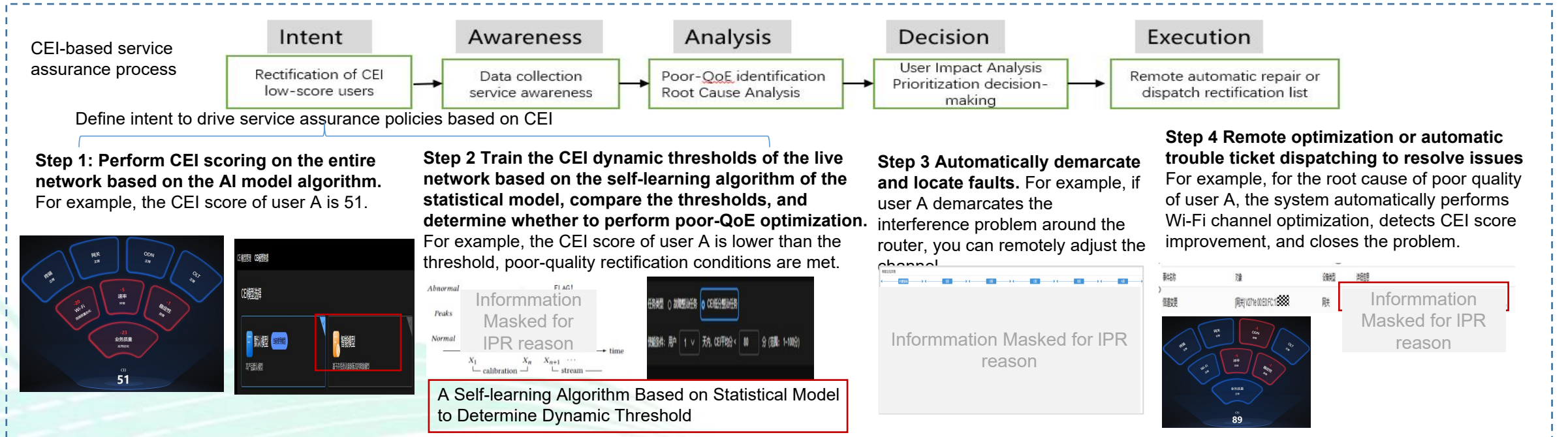
2025/11

Home Broadband Service Assurance Assessment Score (GB1059F) :

Cognitive Activity	Weight	Service Capability	Question	Options	Final Score
Intent	10%	Service Assurance Policy & Intent Alignment	Can the service assurance system incorporate high-level service quality or reliability intents (business objectives) into its operations and decision-making for residential broadband services?	B	3.7
Awareness	20%	Real-Time Service Outage Detection	Can the service assurance system automatically detect when a broadband service is down or severely degraded in real time, without relying on the customer to report it?	A	
	20%	Proactive Performance Monitoring & Anomaly Detection	Does the service assurance system proactively monitor broadband performance (e.g. throughput and latency) and analyze the data to detect anomalies or quality degradation for the service?	A	
Analysis	15%	Service Impact, Correlation, Priority & Root Cause Identification	Can the service assurance system demarcate, locate service issues across multiple customers and layers to pinpoint the root cause or a common source of a broadband service disruption?	A	
Decision	15%	Impact-Based Incident Prioritization	Does the service assurance system automatically assess and prioritize broadband service incidents based on customer impact (such as number of users affected, customer segment/VIP status, or severity of service degradation)	A	
Execution	20%	Automated Service Restoration	Does the system autonomously execute end-to-end service incident response actions (such as remediation, ticketing, notifications) based on determined decisions and priorities, without requiring manual intervention?	A	

Service Capability	Weight	Question	Option A	Option B	Option C	Option D	Answer
Service Assurance Policy & Intent Alignment	10%	Can the service assurance system incorporate high-level service quality or reliability intents (business objectives) into its operations and decision-making for residential broadband services?	Service assurance operations are fully guided by declarative intent policies (defining target customer experience and performance goals), which are automatically translated into specific monitoring thresholds and closed-loop actions.	High-level objectives exist, but they must be manually interpreted and applied to assurance processes; the system doesn't directly use intent inputs for automation.	Only technical parameters (static thresholds) are configured for assurance; no mechanism exists to input or utilize business-level intent or service goals.	No formal objectives or intent are considered – assurance is entirely reactive and incident-driven, with no alignment to predefined service goals.	B

Based on the CEI user experience indicator quantitative evaluation system, the system automatically converts high-level service assurance objectives into specific network quality optimization. Quantitative evaluation is automatically performed using the AI big model algorithm, and technical parameter thresholds do not need to be manually specified. Operators only need to specify poor-QoE closed-loop standards based on the CEI quantitative evaluation results. The system automatically identifies target users and triggers closed-loop actions based on the standards.



Service Capability	Weight	Question	Option A	Option B	Option C	Option D	Answer
Real-Time Service Outage Detection	20%	Can the service assurance system automatically detect when a broadband service is down or severely degraded in real time, without relying on the customer to report it?	Continuous monitoring flags any service outage or major degradation, triggering automated alarms/tickets (often before the customer is even aware of the problem).	Outages are detected via periodic checks or basic alarms so the system finds most issues but with some delay or need for manual confirmation.	The system has limited monitoring; some service outages only become apparent after multiple customers are impacted or after customer complaints accumulate.	No automated outage detection – the company only learns of service downtime when customers report problems.	A

The system can continuously monitor broadband service status. If service interruptions or major performance deterioration occurs, alarms can be automatically reported in real time without manual triggering, and O&M teams can rectify faults before users are aware of them.

Automatic monitoring and real-time reporting of interruption faults such as PON port optical line interruption, ONT power-off, board communication failure, and feeder fiber cut.



Real-time detection and automatic reporting of interruption alarms (such as backbone fiber cuts)



Performance Deterioration Alarm Risks (for example, the performance statistics of the Ethernet port exceed the threshold.) Real-time detection and automatic reporting

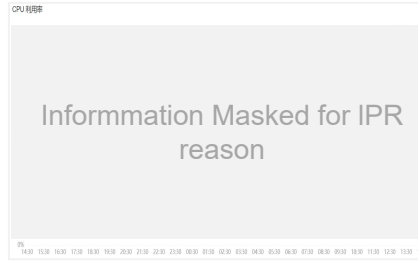
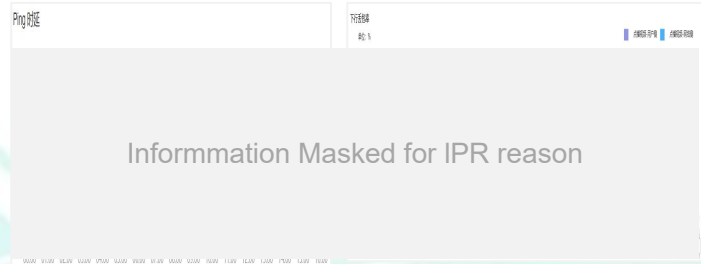
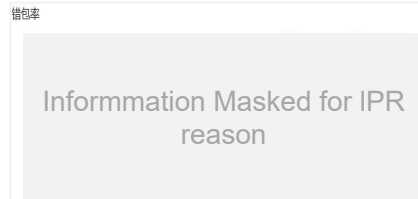
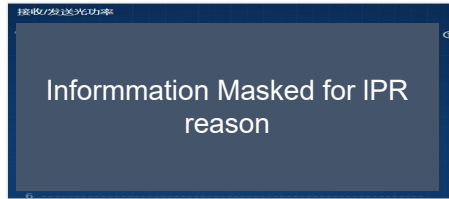


Service Capability	Weight	Question	Option A	Option B	Option C	Option D	Answer
Proactive Performance Monitoring & Anomaly Detection	20%	Does the service assurance system proactively monitor broadband performance (e.g. throughput and latency) and analyze the data to detect anomalies or quality degradation for the service?	The system continuously tracks service performance (speed, latency, etc.) to automatically detect current performance anomalies or degradation in real time, proactively triggering alerts or adjustments.	Key performance metrics are collected and threshold alarms are in place (e.g. alert on speed dropping below a limit), but deeper pattern analysis or early anomaly detection is limited and requires manual review of data. i.e The system provides the information to allow CSRs or customers themselves to see that a particular customer service is experiencing a known outage.	The system has limited monitoring; some service outages only become apparent after multiple customers are impacted or after customer complaints accumulate.	There is no active performance monitoring – service quality problems are only addressed when reported by users, rather than detected by the system.	A

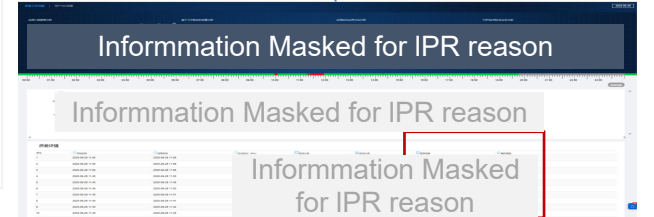
The system can continuously track and monitor indicators such as broadband service performance (delay, rate, and packet loss), network performance (interference duty cycle and optical power), and device performance (PON port packet error rate, gateway CPU, and memory), and automatically detect experience exceptions or performance deterioration. Proactively generate poor-quality lists and detailed poor-quality information.

Proactive monitoring of performance indicators such as rate, delay, and packet loss, and automatic detection of exceptions

Automatically analyzes and checks performance exceptions and reports alarms in real time.



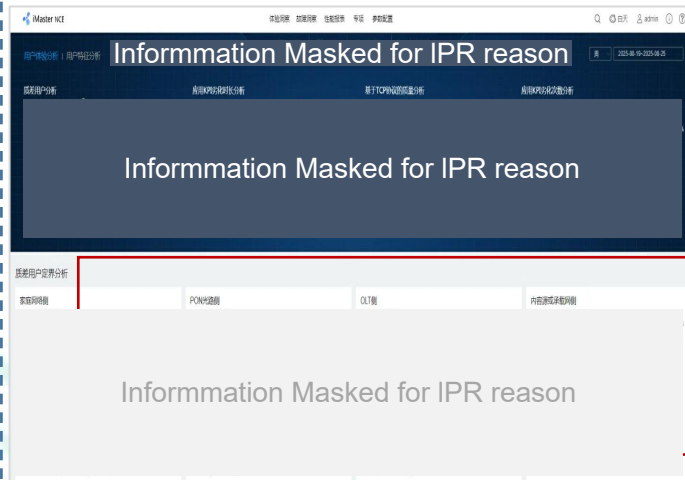
Poor-QoE deterioration of applications used by users is reported in real time.



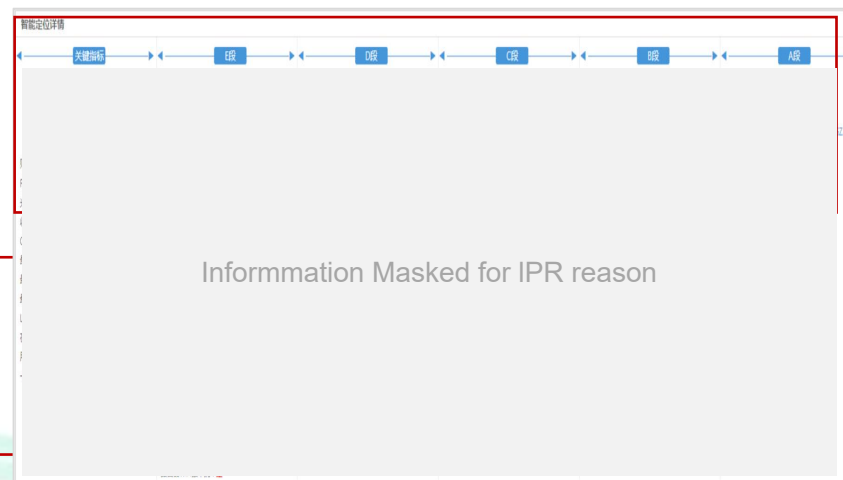
Service Capability	Weight	Question	Option A	Option B	Option C	Option D	Answer
Service Impact, Correlation, Priority & Root Cause Identification	15%	Can the service assurance system demarcate, locate service issues across multiple customers and layers to pinpoint the root cause or a common source of a broadband service disruption?	The system automatically correlates alarms and performance data across customers and network layers, isolating the root cause of service issues for individual customers (e.g. pinpointing a specific network segment or equipment failure affecting single or multiple users) in real time.	The system automatically correlates alarms and performance data across customers and network layers, isolating the root cause of service issues for multiple customers (e.g. pinpointing a specific network segment or equipment failure affecting users) in real time.	The system provides basic grouping of related service alarms (e.g. by geographic area or network node), offering hints of a common cause, but determining the true root cause still requires significant manual analysis by experts.	Some correlation is done manually – operations staff must pull data from various sources and manually recognize patterns to identify if separate service issues share a cause or location	A

The system can demarcate service problems of a single user in four segments. (home network, PON optical line, OLT side, and OLT upper-layer network) Automatically locate the root cause of poor service quality and output the root cause list of poor service quality.

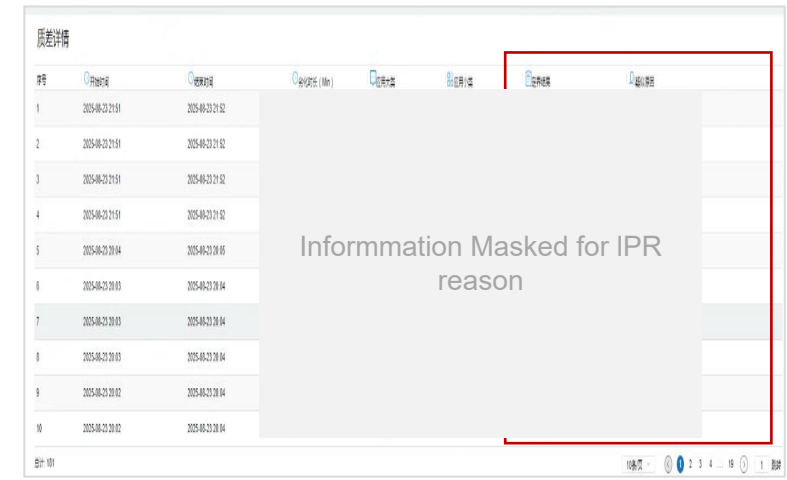
Automatic segment-based demarcation and root cause identification



Faults of a single user can be demarcated by segment and the root cause can be located



Demarcation and root cause locating can be performed for a single user based on the application deterioration dimension.

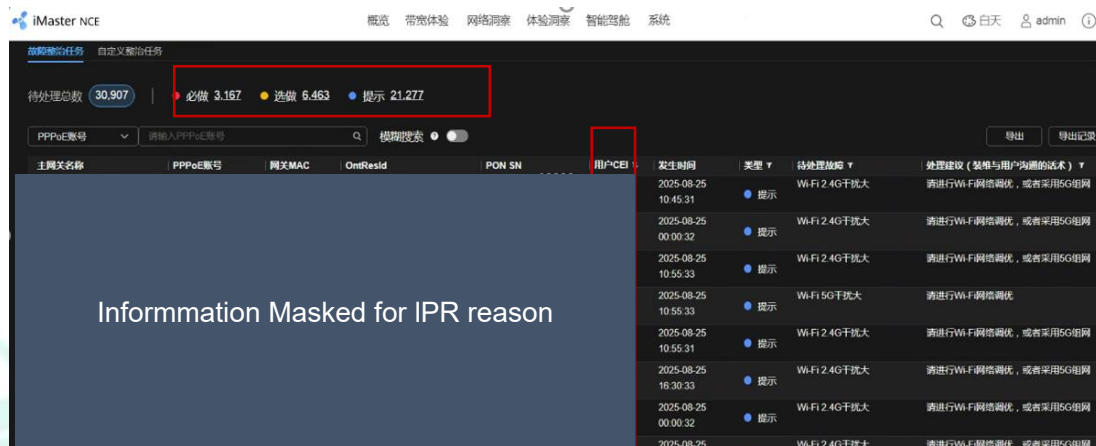


The screenshot shows a table with columns for '序号' (Serial Number), '开始时间' (Start Time), and '结束时间' (End Time). The table contains 10 rows of data. A large, semi-transparent watermark reading 'Information Masked for IPR reason' is overlaid on the table, obscuring the specific details of the application deterioration events.

Service Capability	Weight	Question	Option A	Option B	Option C	Option D	Answer
Impact-Based Incident Prioritization	15%	Does the service assurance system automatically assess and prioritize broadband service incidents based on customer impact (such as number of users affected, customer segment/VIP status, or severity of service degradation)	Incidents are auto-ranked by real-time customer impact (e.g. number of subscribers or VIP customers affected and any service level commitments), ensuring the most critical issues receive top priority for resolution.	The system classifies incidents by severity or type, but prioritization of response is largely manual – operations staff must decide which issues to address first using the provided classifications.	Incidents are generally handled on a first-come, first-served basis or by simple criteria; there is no systematic impact-based ranking, aside from ad-hoc judgments by field teams or support staff.	No prioritization mechanism exists – service issues are addressed in the order they are reported or detected, without regard to the number or importance of customers affected.	A

Based on the number of users (single user or multiple users) affected by a service fault/event, the system classifies alarms of different severities (critical, major, minor, or warning). Based on the type of the problem that causes poor service quality, Provide suggestions on the problem handling sequence based on different rectification priorities (mandatory, optional, and prompt) to ensure that key problems are solved first.

The CEI poor-quality list is differentiated by mandatory, optional, and prompt. The priority is also differentiated by CEI score.

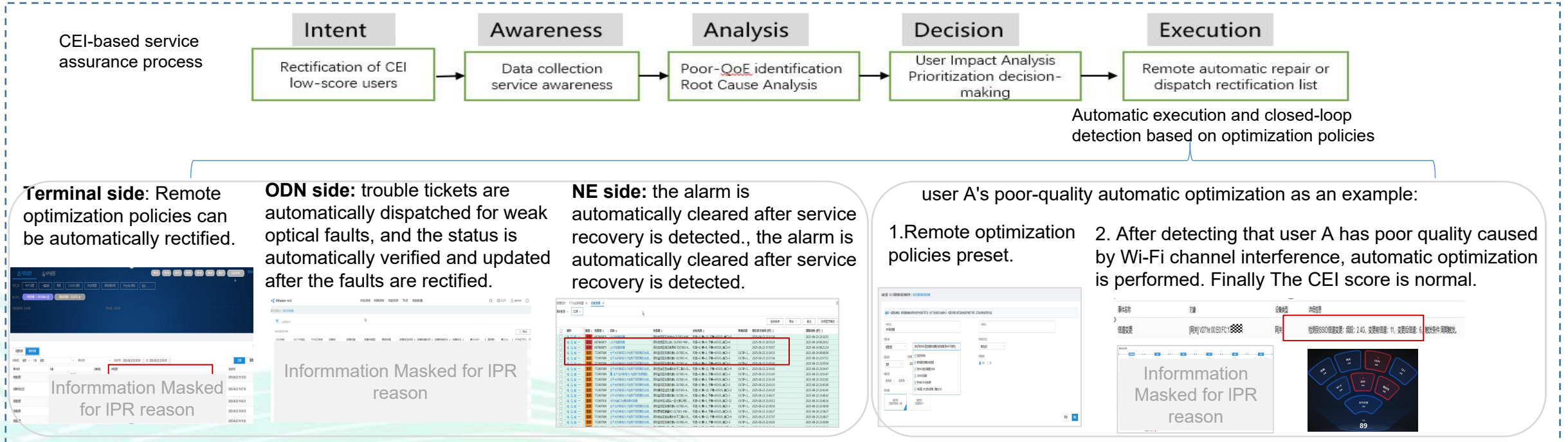


Service alarms are prioritized by severity (critical, major, minor, or warning).



Service Capability	Weight	Question	Option A	Option B	Option C	Option D	Answer
Automated Service Restoration	20%	Does the system autonomously execute end-to-end service incident response actions (such as remediation, ticketing, notifications) based on determined decisions and priorities, without requiring manual intervention?	The system automatically executes the entire incident response process at the service level based on generated decision logic. This includes remediation, service ticket updates, alerts, and validations with no manual initiation required.	The system supports semi-automated execution at the service level through scripts or orchestrated workflows that require manual triggering or human confirmation for execution steps.	The system does not support any form of automated execution. All execution tasks are performed manually by operations teams, based on incident data and decisions.		A

The system can automatically perform remote optimization based on defined optimization policies in poor-QoE scenarios such as severe Wi-Fi interference and Wi-Fi 5G disabled. Automatically generates service orders for poor-QoE ODN optical paths such as weak optical signals. Service status can be traced and verified, and alarm status and service work order status can be automatically updated without manual intervention.



Thank you