



A PROPOSAL TO

Lake Bluff School District 65

Monitoring & Managed Services

NOVEMBER 13, 2024



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Executive Summary

Sentinel Technologies, Inc. (Sentinel) is honored to be able to provide a NOC Monitoring and Managed Services solution for Lake Bluff School [District 65](#).

For more than 40 years, Sentinel has been recognized as a top-tier business technology solutions and services provider dedicated to delivering the highest quality Customer service and support. Even as our services have spanned generations of technology, Sentinel has stayed at the forefront of IT developments and maintained a singular focus on providing practical and innovative solutions. With single-source accountability, Sentinel's proven repeatable methodology, processes and experienced teams can efficiently address a full range of IT needs - from NOC monitoring and managed services, to communications, to data center, to cloud solutions, to business process improvement and assessments, to targeted applications and end-to-end IT solutions. Our proven success has allowed us to expand from our original charter of providing technology maintenance services to our current standing as one of the leading IT services and solutions providers in the U.S. and beyond. Sentinel's engineers, Customer Service and support, and project management team's reputation has become synonymous with high quality, cost effective solutions for our customers. Sentinel's pricing response will reflect our sincere desire to establish a long-term partnership. Sentinel is confident we will emerge as the top option for executing your business critical managed services, but also as your preferred partner for contributing to your overall growth and future success.

Sentinel provides our customers with the complete solution: vision, design, product, implementation, documentation, service and support. Sentinel's services span the range of business verticals in the mid-market, upper mid-market, and enterprise level organizations. Companies in Financial and Banking, Healthcare, Government, Education, Legal, Utilities, and Manufacturing verticals have all taken advantage of Sentinel's ability to take either full responsibility or act as a supplemental contributor to our customer's most important business technology initiatives.

Headquartered in Downers Grove, IL, Sentinel Technologies has independently managed offices in eleven locations: Chicago, IL, Springfield, IL, Milwaukee, WI, Detroit, MI, Grand Rapids, MI, Lansing, MI, Orlando, FL, Houston, TX, Columbus, OH, Denver, CO and Phoenix, AZ, allowing us to service our customers both nationally and internationally. Sentinel applies an extraordinary breadth of technical solution expertise to design, sell, deploy and support our customer's business technology needs. Our unwavering commitment to thought leadership and customer satisfaction maximizes both the value of technology investments and its impact to the business. When it comes to achieving a tangible ROI and sustainable performance from your IT environment, Sentinel stands apart. Sentinel's large service staff (650+ employees), multitude of original equipment manufacturers (OEM) certifications, a 24x7 Customer Care Center and a professionalism and commitment to service excellence act in combination to ensure a successful partnership.



Sentinel Monitoring System & Support Overview

The diverse nature of today's Local and Wide Area Networks creates support challenges for many organizations. Sentinel Technologies' Monitoring and Managed Service offerings address these challenges by providing specialized resources to support customers' systems.

Sentinel has been delivering mission critical network support services to customers since 1982. Our goal is to provide our customers with peace of mind knowing their network is being monitored by professionals 24 hours/day, 7 days/week. Through years of experience in working with Network Operations Centers (NOC), Sentinel has developed a unique and well rounded perspective on how to provide value through monitoring services. It is not just dials, graphs and trend lines – the real value lies in avoiding outages and minimizing the impact if an outage occurs.

NOC Monitoring and Managed Services Benefits:

- **Reduce Downtime** by ensuring systems are monitored and remediation is delivered 24x7x365 with industry leading SLAs.
- **Stabilize Costs** by creating a predictable cost model offering predefined, all-inclusive management and administration cost per device.
- **Improved business continuity** with SLA bound infrastructure availability and performance through 24x7x365 proactive monitoring and support via Sentinel's dedicated Network Operations Center.
- **Reduced risk of employee turnover** creating uncertainty and inconsistency in the operations. Sentinel's Managed Services will provide a level of continuity and consistency.
- **Increase IT support coverage** through utilizing Sentinel's dedicated 24x7x365 Network Operations Team who specializes in day-to-day operations and maintenance.
- **Provide single number resolution** to IT infrastructure services delivery.
- **Deliver infrastructure services elasticity** providing fixed rate supplemental IT services.
- **Enhanced Infrastructure Reliability** by leveraging the breadth of experience available through Sentinel's extensive technical staff to support a wide range of technologies.



STABILIZE COSTS



INCREASE SYSTEM HEALTH



STAY FOCUSED

Scope of Work

Sentinel NOC Remote Monitoring and Managed Services

Sentinel offers full managed services and monitoring solutions for advanced visibility into performance and utilization of resources at great scale. Based on multiple proven platforms, advanced correlation services and multiple alerting options, Sentinel has built an industry leading Network Operations Center (NOC).

Sentinel NOC Remote Monitoring features include:

- NOC 24 x 7 Remote Monitoring via a secure VPN tunnel.
- Up/Down status monitoring via ICMP requests.
- Availability / Uptime.
- Syslog/Trap storage.
- Hardware Device Monitoring and Analysis.
- CPU, Memory, Disk space and Latency.
- WAN Circuit status.
- Traffic throughput, utilization, errors and discards of WAN circuits, Trunk ports or any critical interface.
- Wireless Monitoring – AP association status, SSID, Signal Strength, Wireless clients.
- Alerting (built with intelligence that eliminates false positives).
- Alert Routing to NOC and/or dedicated engineer for immediate remote resolution.
- Hardware Health Reporting (fan, power supplies, temperature, environmentals, and the like).
- Reporting (Inventory, Utilization, Performance, and much more).
- PRI circuits – monitors the status and capacity of your PRIs.
- Voice Gateways - monitors the status and utilization of your voice gateways.

SCOPE OF WORK

MANAGED SERVICES FEATURE HIGHLIGHTS

- **Sentinel Remote Diagnosis and Remote Repair Capability.**
Sentinel leverages remote tools to ensure 24x7x365 support service is delivered quickly and efficiently. Sentinel understands that your IT environment is dynamic and demands visibility and expert engineers around the clock and will stay committed to providing continuous effort and support.
- **Carrier Incident Handling.**
Sentinel will work with carriers on resolving circuit issues and outages. Sentinel has numerous levels of escalation points through multiple carriers due to the maturity and multiple years of experience providing carrier incident handling.
- **Configuration Management.**
Sentinel will automatically back up system configurations on network devices and any device that has a CLI (Command Line Interface). Configurations are backed up nightly and stored in an encrypted database *only* if a change has occurred.

Sentinel will automatically back up system configurations on the following devices. Configurations, Change Reports and on-demand download ability are available in the NOC web console. The following methods will be used to back up the environment:

Device Type	System Config Backups
Routers	NOC via CLI
Switches	NOC via CLI
Firewalls	NOC via CLI

- **Sentinel Complete Restore.**
In the event of hardware failure, hardware replacement, catastrophic outage causing corrupt config, or any loss of system configuration, Sentinel maintains backed up configurations so systems can be restored promptly, providing minimal downtime in the event of an outage (*restoration only applies to backed up equipment listed above*).
- **Sentinel End-To-End Problem Management.**
Sentinel will provide management and support services on any equipment covered under the agreement. It is understood that at times, manufacturers or third party providers might need to be engaged for further support. Sentinel will work with agents in attempting to resolve issues as long as maintenance and a LOA (letter of agency) is maintained.
- **Device Administration.**
Sentinel will provide dedicated expert engineers to administer covered systems on a 24x7x365 basis. Unlimited Moves, Adds and Changes are included to assist with your day to day administration. A best practice guideline of 2 hours will be used on change tickets.

SCOPE OF WORK

- **Preventative Maintenance and Patching.**

Manufacturer releases are important for staying up to date with critical software and security patches. Sentinel will work with on a strategy for this preventative maintenance while taking into account your change control guidelines and approval process. A detailed report of system updates will be provided during the following intervals with recommendations and Scope of Work.

Firmware updates and minor release updates are included in the following schedule.

Device Type	Level	Review Frequency	Performed
Routers	Minor	6 Months	As Needed or Requested
Switches	Minor	6 Months	As Needed or Requested
Firewalls	Minor	3 Months	As Needed or Requested
Windows Servers	Minor	Monthly	Automated

- **Customer Experience Manager.**

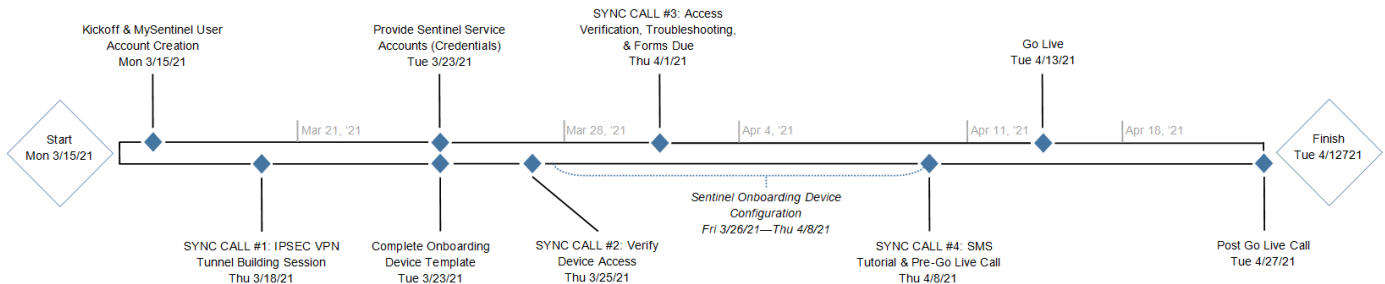
Sentinel wants to ensure our customers have an exceptional, long-term relationship with us, which is why we have a dedicated Customer Experience (CX) team devoted entirely to success and satisfaction. The CX team, which includes a designated Customer Experience Manager for each customer, schedules regular cadence meetings to review data and metrics, develop strategy, set goals, and solicit feedback on how we're doing.

NOC Onboarding

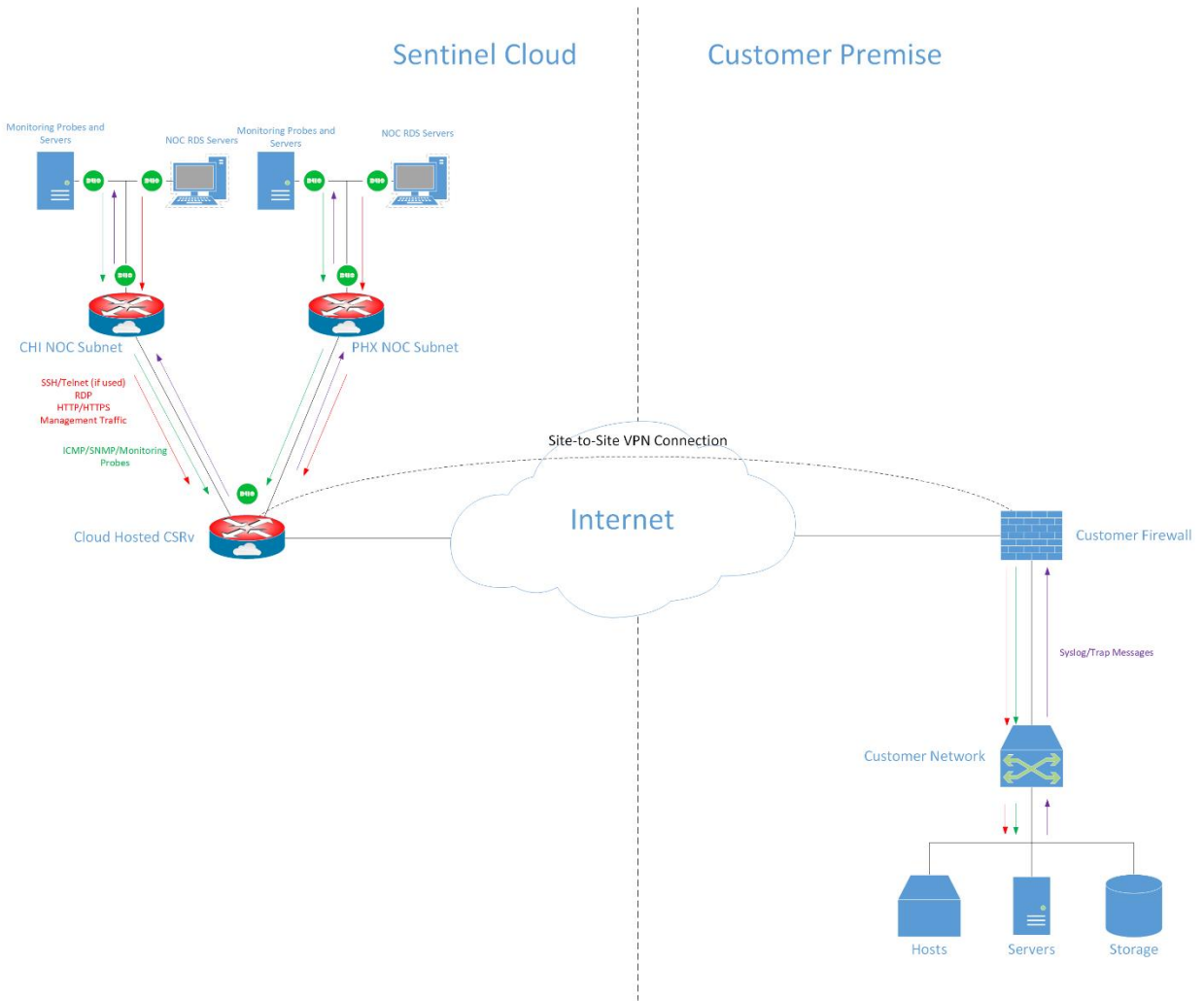
Sentinel utilizes PMI best practices for the onboarding of Managed Services Customers. During the onboarding and transition period of the managed services engagement, Sentinel will define key stakeholders necessary to execute all onboarding responsibilities (e.g. PMs SDMs, SMEs, etc.), and document any risks that could affect the onboarding project.

To ensure complete transition within 30-45 days, Sentinel will provide a complete project plan and work breakdown structure outlining the tasks and responsibilities of the onboarding phase. Sentinel will execute all necessary tasks outlined within the work breakdown structure in order to complete the project on time, and as needed we will assist with gathering any information required to complete the Customer Onboarding Forms. Once all the required onboarding forms are complete and credentials have been created to allow Sentinel access to the network, the Sentinel onboarding Project Manager will engage engineering resources to configure and establish VPN connectivity to the NOC network. After connectivity has been established to the network and access has been granted to all applicable devices, the Sentinel onboarding engineer will execute or assist with all necessary configurations to establish connectivity to each device. Following the completion of all devices being monitored, the Sentinel onboarding team will conduct training on how to navigate and utilize the features within our Sentinel Monitoring System. The onboarding team will cross train and hand over all findings that have been discovered during the onboarding phase to the dedicated support teams. Once the project plan has been fully executed and all work has been accepted, you will be officially transitioned to the NOC and managed services team that will be supporting the core technologies: network, server, and security.

Onboarding Timeline Sample

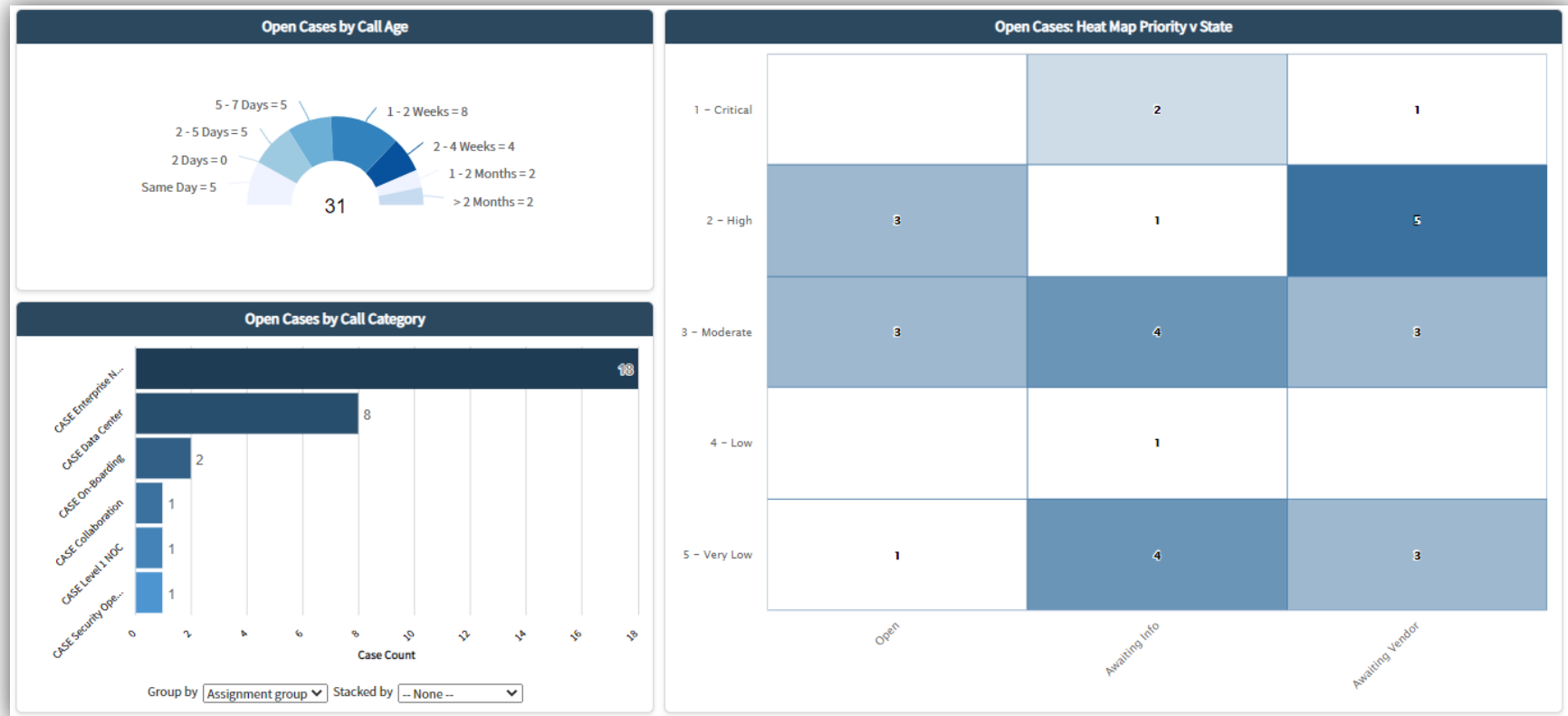


Connectivity Diagram



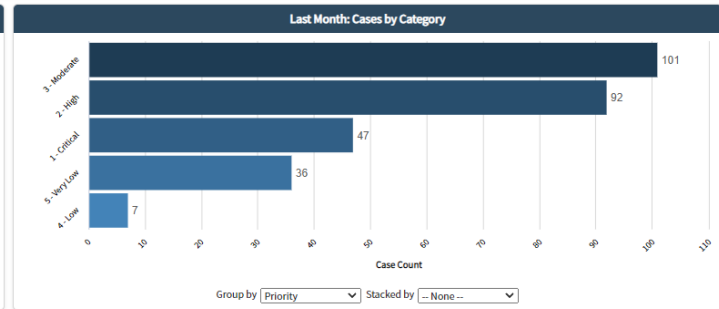
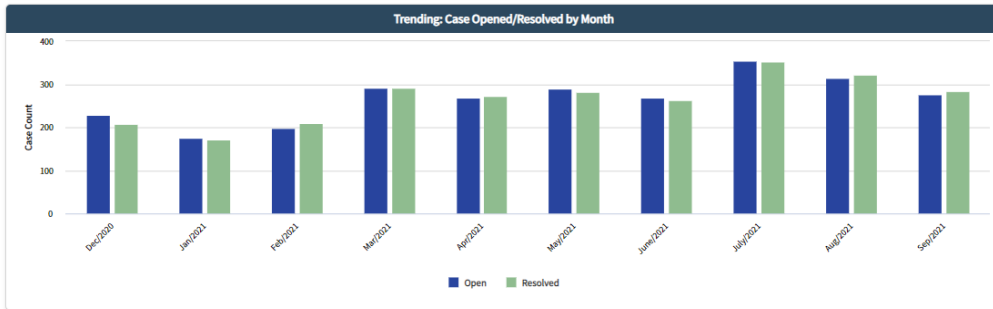
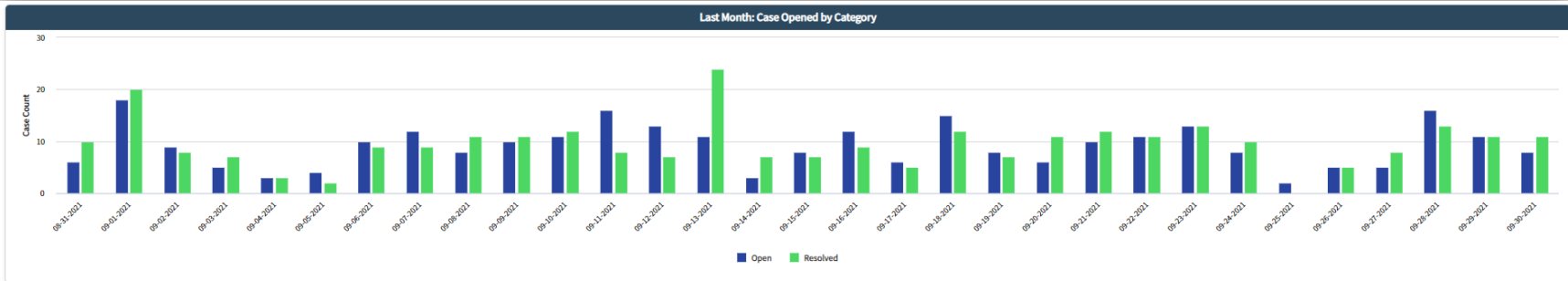
Quality Assurance

Sentinel's Quality Assurance team will host regularly scheduled review meetings to review NOC monitored data, uptime & availability, traffic patterns, root cause analyses of chronic issues, trouble ticket data and SLAs, and help identify environment trends or capacity issues. Additional dashboards within ServiceNow will show an executive view into the performance, availability, usage and equipment inventory. Below are sample dashboards:

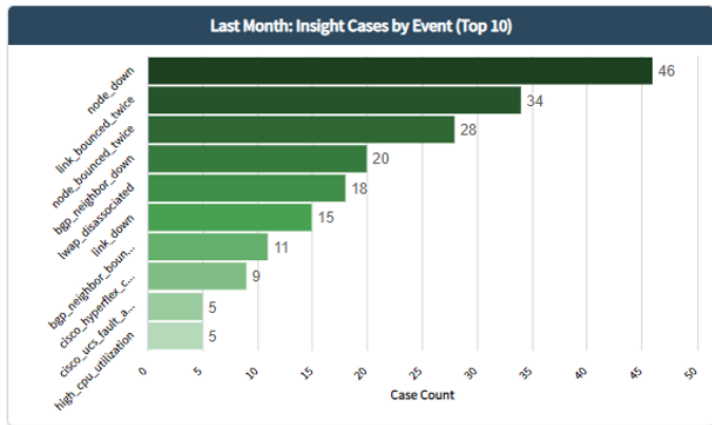
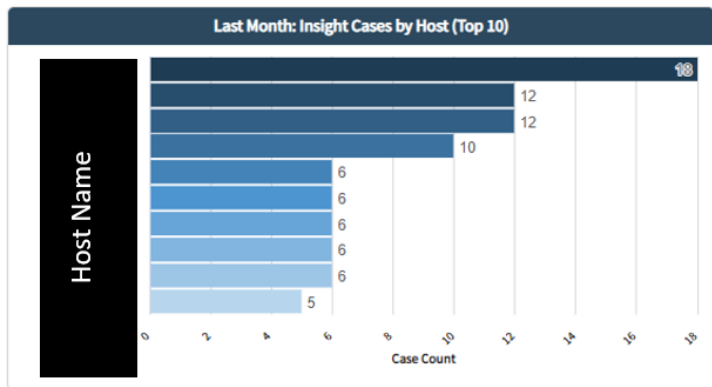


QUALITY ASSURANCE

Open Case Details											
Number	Case	Opened	Contact	Assignment group	Assigned to	Channel	State	Priority	Updated	Additional comments	
31 total Cases											
▼ Assignment group: CASE Collaboration (1)											
Case #	Case Description	05-11-2021 17:45:59	Customer Contact	CASE Collaboration	Erick Bergquist	Web	Awaiting Info	5 - Very Low	05-26-2021 12:38:14	Additional Comments	
▼ Assignment group: CASE Data Center (8)											
Case #	Case Description	05-30-2021 08:52:56	Customer Contact	CASE Data Center	Phil Cook	Insight Network	Open	2 - High	06-01-2021 12:40:26	Additional Comments	



QUALITY ASSURANCE



Last Month: Insight Events v Host

This heatmap displays Insight Events v Host. The y-axis lists Event Names, and the x-axis represents Host Names. Values are shown in colored cells, with blue for values 1-6, green for 7-10, and red for 11-18.

bgp_neighbor_boun...					1												5
bgp_neighbor_down					3												6
cisco_hyperflex_c...										3	6						
cisco_license_fai...																	1
cisco_ucs_fault_a...						4											
high_volume_utili...					1												
interface_errors...	4																
link_bounced_twice						1	7			5	1	1	3			8	
link_down						1	3			1	2					4	
lwap_disassociated																	18
microsoft_exchang...																	
node_bounced_twice										2	1					2	4
node_down	4	3	2							2	5					3	4







Service Level Agreements

Sentinel makes commitments to industry leading SLAs within NOC Monitoring & Managed Services. SLAs are defined from first communication to a MTTR (Mean Time to Repair) for incidents and change tickets. All SLAs are tracked and worked through Sentinel’s trouble ticketing system, ServiceNow, and reporting is made available through the ticketing console on www.sentinel.com.

The following is a matrix of Sentinel’s SLAs built on industry standards (ITIL) Urgency/Impact definitions.

		Urgency		
		Critical Event has occurred – Immediate action required	High Event scheduled to occur – Need response	Affects Multiple Users Event is far enough away in time to allow response – no loss to productivity
Impact	Affects Enterprise System down completely. No functionality of an entire system, business impacted.	P1	P1	P2
	Affects Site/Dept A function of the system is down, impact to the customer	P1	P2	P3
	Affects Multiple Users Something is not functioning but is not impacting business. P1 or P2 issue is no longer impacting business and a workaround has been provided	P2	P3	P3

Sentinel guarantees the following SLAs and will report on SLA performance through automated reporting and the monthly quality assurance review meetings.

		Notification	Response	Restore/Implement Mean Time To Restore	
P1	Interruption making a critical functionality inaccessible or a complete network interruption causing a severe impact on services availability. There is no possible alternative.	 Incident	15 min	1 hour	8 hours
		 Request	15 min		2 hours
P2	Critical functionality or network access interrupted, degraded or unusable, having a severe impact on services availability. No acceptable alternative is possible.	 Incident	15 min	2 hours	24 hours
		 Request	15 min		8 hours
P3	Noncritical function or procedure, unusable or hard to use having an operational impact, but with no direct impact on services availability. A workaround is available.	 Incident	15 min	8 hours	48 hours
		 Request	15 min		48 hours

PRICING

Pricing

Sentinel Monitoring & Managed Services

Sentinel's professional support fees are both highly competitive and value-oriented. Our commitment to our Customers is to deliver measurable benefits that far exceed the associated investment. Our firm's strategy is to bring professionals with focused expertise at a reasonable price.

Lake Bluff School District 65 will see immediate value and will have selected the best-in-class combination of value, partnership, services, support, and expert engineers.

MANAGED SERVICES

One Time Setup	\$	3,600.00
Monthly Total	\$	2,801.00

Customer Success Program				
Product Description	Qty	Unit Cost	Setup Cost	Comments
Digital Experience Platform (DXP)	1	\$ 0.00	\$ 0.00	

Infrastructure				
Product Description	Qty	Unit Cost	Setup Cost	Comments
Firewall Security Device	4	\$ 235.00	\$ 25.00	(4) Cisco 31XX
Switch	15	\$ 60.00	\$ 25.00	(2) 2Cisco 9300 (13) Cisco 9200
Wireless Access Point	44	\$ 6.00	\$ 0.00	(44) Meraki MR-46
SD-Controller	1	\$ 175.00	\$ 25.00	Meraki Cloud Portal
Wireless Access Point	46	\$ 6.00	\$ 0.00	(46) Cisco 9164

Proactive Monitoring				
Product Description	Qty	Unit Cost	Setup Cost	Comments
NOC Monitoring + Alerting - Network/UPS	4	\$ 24.00	\$ 25.00	(4) APC Smart UPS 5000VA w/ expansion batt.

Support Services				
Product Description	Qty	Unit Cost	Setup Cost	Comments
Service Fee	1	\$ 150.00	\$ 3,000.00	

SSAE 16 Attestation

In addition to the core competencies, certifications and extensive training regimens required of its engineers and technicians, Sentinel has also achieved SSAE 16 Service Organization Control (“SOC”) 2 Type II attestation. Assessed by independent auditors from the nationally-renowned auditing firm Plante Moran, PLLC, this “seal of approval” demonstrates Sentinel’s commitment to the highest standards of operational excellence for its Customers. The SSAE 16 attestation process is a standard that recently was created by the American Institute of Certified Public Accountants (“AICPA”) to replace the SAS 70 certification process and expand into the realm of reporting on the effectiveness of a service organization’s controls relating to operations and compliance. The independent attestation of Sentinel’s operations verifies the strength of our controls in the three Trust Principle areas of Security, Availability and Confidentiality.



Sentinel is an audited SSAE 16, SOC 2 Type II, organization and our CloudSelect® cloud services are delivered from an equally qualified data center partner and co-location facilities. Upon request Sentinel would be happy to meet with and provide information to any interested parties as **this should be a critical factor in any cloud decision that both the partner and facilities are audited and not just the facilities.**