RFI RESPONSE TO NEWPORT - MESA UNIFIED SCHOOL DISTRICT

Brivo Systems LLC
7700 Old Georgetown Road
Suite 700
Bethesda, Maryland 20814
Tel: (866) 692 7486

Contact: Tyler Hirbour
Email: tyler.hirbour@brivo.com
Phone: (301) 642 3787

Eagle Eye Networks, Inc.
4611 Bee Cave Road
Suite 200
Austin, Texas 78746
Tel: (512) 473 0500

Contact: Rickey Mapp
Email: rmapp@een.com
Phone: (361) 522 0354
Table of Contents

(1) Executive Summary

(2) Questionnaire

(3) The Brivo/Eagle Eye Solution

(4) Customer References

(5) Pricing

(6) Supporting Documentation
Executive Summary

Brivo and Eagle Eye Networks (EEN) offer a unified security platform that dramatically reduces the costs and efforts associated with deploying and maintaining an access control and video surveillance solution. Brivo was founded in 1999 and is the original innovator and global leader of cloud based access control. Eagle Eye Networks was founded in 2012 and is a global leader in cloud based and hybrid video surveillance systems. The two solutions are tightly integrated to offer a seamless unified experience. Additionally, Brivo supports alternative VMS solutions such as Exacqvision, Salient, and OpenEye to name a few.

It is nearly impossible to think about solving the unique demands of Public Education without using cloud based applications. From meeting the daily operational needs of administrators, teachers and students, to the safety of students and staff, the Software as a Service (SaaS) model provides the greatest return on investment while also allowing for a responsiveness to K-12 needs that other models cannot provide. Administrators and educators across the country have been using cloud based applications such as Google Apps, Office 365, ConexED, ParentLocker and others, for convenience, accessibility, and ease of use. The main reasons cited by IT leaders in K-12 for migrating districts to cloud applications include greater cybersecurity and privacy protections, as well as more robust data retention and fault tolerance - all of which can be delivered at a fraction of the cost when compared with internal infrastructure and on-premise applications. Since cloud based applications have been adopted as the answer to many of the administrative, education and IT needs of K-12, it’s no surprise that cloud also provides the most effective solution for physical security for many of the same reasons - ease of use, accessibility, cybersecurity, privacy protections, and cost savings.

The value Brivo and Eagle Eye Networks bring to K-12 districts is a combination of scalability, resilience, security and cost savings. When a school district no longer has to worry about the software and computing hardware infrastructure necessary to support their physical security environment, those resources are able to focus instead on supporting teachers and students. This combination can be powerful - dollars saved on infrastructure can be reinvested in other areas or in maximizing the district’s security profile.

As you evaluate physical security cloud technology, it is important to think about creating a full security ecosystem that spans access control, mobile management, mobile credentialing, video surveillance, visitor management and identity access management. Brivo offers the opportunity to bring all of your physical security and cross-functional business optimization applications together to create an integrated, data-driven, technology-forward platform.
Some of the key attributes that differentiate the Brivo / Eagle Eye Networks offering from others include:

- Brivo’s cloud based access control solution offers flexible hardware options so you may be able to leverage some of your existing security infrastructure. Additionally, Eagle Eye Networks supports thousands of camera models from all major manufacturers.

- Proven SaaS platform with over 20 years of experience - Brivo stands out in that we were first to the market long before any other cloud based physical security offerings were born. As of today, most other true cloud, physical security SaaS offerings are less than six years old and not as tested or comprehensive as Brivo’s. This provides you assurance that the product is fully developed and proven.

- SOC 2, Type 2 audit - Cyber security is essential to our business. We are one of the only manufacturers in the industry that can provide you with a SOC 2, Type 2 audit performed on our company, not our host provider AWS. If you are to ask other manufacturers for this, they will either say they don’t have one or they will tell you they are compliant and send you AWS’ audit.

- Unified security platform - Brivo combines access control, video surveillance, visitor management, intrusion detection, and Identity and Access Management / SSO into a unified experience.

- Support for non-proprietary hardware - Brivo supports open source hardware from Mercury. We also manufacture and support our own hardware giving you many options to choose from. Brivo supports any non-proprietary Weigand or OSDP reader. Eagle Eye Networks supports analog and Onvif profile S cameras from all major manufactures.

- Direct manufacturer support - Brivo and Eagle Eye provide direct, remote technical support for troubleshooting and programming assistance.

- First responder feature - Brivo and Eagle Eye Networks offer a feature that allows the school district to pre-designate emergency contacts who will receive event notifications from the platform. In the case of video, Eagle Eye Networks notifications provide the live feed of cameras during an emergency situation based on permissions set by the end user. This provides local law enforcement or other authorized agencies insight and situational awareness.

- Support a wide variety of Intrusion Detection Systems (IDS) - You can combine access control with IDS systems. There are several methods available for integration. For example, the first person who swipes in for the day will disarm the alarm. Or, you can have a dedicated reader which would be used for arming/ disarming the IDS system.

- Extensive Dealer Base - There are many certified Brivo and Eagle Eye Networks dealers in the Los Angeles and Orange County areas. Most major security integration companies sell and service our platform.
Brivo and Eagle Eye Networks work together to deliver a true, cloud-based video and access control experience. Both platforms were designed and developed from the ground up to facilitate a cyber secure, highly scalable, and easy-to-use, integrated solution. Both are open-source platforms, and all of the application programming interface (API) documentation is available online.

**About Brivo**

With over 20 years in the industry, Brivo is the original innovator of cloud-based physical access control solutions for commercial buildings. Currently serving over 25 million users, Brivo offers a unified security platform including access control, mobile credentials, mobile administration, video surveillance, identity management, visitor management, and elevator control. Brivo also offers a complete API platform service that empowers partners to build custom integrations and vertical market offerings. Our mission is to make the world a safer place by providing a subscription-based service for securing buildings using reliable, convenient, scalable, cyber-hardened technology. More than ten years of cybersecurity audits underscore our commitment to protect our customers.

**About Eagle Eye Networks**

Eagle Eye Networks was established in 2012 to make video security easier for all of us. Camera systems have traditionally been pretty complex, challenging for most people to manage, and costly. Eagle Eye Networks leverages the latest modern web and cloud technologies to make cameras easier to use, more accessible, and more robust. We believe that by doing this we will expand the applications for video deployment. We eliminate a tremendous amount of headache by putting everything in the cloud where we can take care of it so you don’t have to. With the Eagle Eye Security Camera VMS you can deploy analytics on one camera or multiple cameras – on any type of camera – and you can do it without installing software or buying larger servers. It’s all done in the cloud on our servers.

**What makes the Brivo and Eagle Eye Networks solution superior?**

Both Brivo and Eagle Eye Networks are owned by American businessman and serial entrepreneur Dean Drako, yet operated and managed as separate entities working closely together with aligned business goals. We believe this individualized focus and expertise provides a more reliable and feature rich integrated solution than other solutions are able to provide. From software development to mutual regression testing prior to new feature rollouts, and our delivery of world class customer support, our goal is to ensure the end-to-end solution meets NMUSD needs.
I. General Requirements

A. Deploy systems and integration with the best value to the District
Both Brivo and EEN’s SaaS based solution provides tremendous value and a lower Total Cost of Ownership compared to on-premise, server based solutions. The upfront capital investment is much lower than a traditional system because the need for infrastructure like servers, computers and sophisticated networks are eliminated. Additionally, our SaaS platform eliminates most of the IT burden which saves time, money and provides a more stable and reliable solution.

B. Implement proven and reliable technology
In 1999, Brivo pioneered Access Control as a Service (ACaaS). There were no ACaaS systems available prior to Brivo entering the market. Today, with over 20 million users in over 40 countries worldwide and 70,000+ deployments, Brivo has over a decade of documented reliability metrics, with both internal and 3rd party audits and certifications, Brivo is the most mature ACaaS platform in the market. Eagle Eye Networks are pioneers of SaaS VMS. It is the most mature Cloud based VMS system in the market.

C. High to medium-high system maturity level
Both Brivo and EEN are mature cloud providers. The Brivo product was launched in 2001 and EEN launched in 2012.

D. Scalable
Both Brivo and Eagle Eye provide for ultimate scalability because of our cloud-centered system architecture.

E. Flexible – communication/technology issues at individual schools. Some have better connections than others
Brivo – Ethernet, Cellular and Wi-Fi. Eagle Eye – Ethernet, Cellular and Wi-Fi (Note – NMUSD to support bandwidth infrastructure).

F. Serviceable by NMUSD staff
The system is serviceable by NMUSD staff. Because both platforms are cloud-based, there is no need for IT maintenance. Data redundancy, automatic software and firmware updates, cyber security protection is managed by us. All administration would be managed by NMUSD staff.

G. Simple and efficient integration
Brivo and EEN offer a modern restful API.

H. Support for wireless solutions
Yes, Brivo offers many wireless lock integration options with Schlage, Assa Abloy and Salto.

I. Compatible with District’s HP servers
Yes, the Brivo Access and Eagle Eye Networks VMS are cloud based solutions accessed through any contemporary web browser. ACS panel systems and Eagle Eye Networks VMS appliances connect primarily via LAN to access the internet via standard outbound connections. DHCP and Static IP device addressing is supported, and can be leveraged based on NMUSD needs and requirements. No data is stored on local services.

**J. Deployable in a virtual server environment**
Brivo and EEN are true cloud-based solutions offering the ultimate virtual server environment.

**K. Active Directory integration**
Yes, both local LAN based Active Directory and cloud based Azure AD.

**L. Multiple local integrators (single regional integrator is not acceptable)**
Both Brivo and EEN have an extensive network of certified integrator partners in Southern California.

**M. Direct manufacturer support**
Both Brivo and EEN provide direct end user client support. Your staff can call us directly for remote phone support.

**N. No sole source equipment**
Complies. Brivo currently has multiple authorized and certified dealers in Southern California.

**O. Strong cyber-security support – Manufacturer responses must discuss cyber-security plan in response and also explain how firmware updates are performed.**
Cyber security is a major benefit of selecting Brivo and EEN. Both Brivo and EEN devices communicate outbound only via port 443 or 80; there is no need to open ports on your network. Additionally we currently use 256 bit TLS 1.2+ encryption. Both Brivo and EEN have a SOC 2, Type 2 audit performed annually on our companies. Brivo provides Two-Factor authentication natively and Multi-Factor Authentication using Single Sign-On (SSO) integration with Okta and MS Azure AD. Firmware upgrades are automatically initiated from Brivo and EEN as required for feature upgrades or cybersecurity protections.

**P. No biometrics**
Biometric options are available, but not required for system use.

**Q. Audio capability - Voice communication capability desired but voice recording will be disabled per District policy.**
EEN has the ability to record audio if needed.
II. Access Control

A. Access control technology not susceptible to cloning.
Brivo encourages and supports a wide variety of secure smart credentials that are not susceptible to cloning.

B. Proximity technology access cards (contactless smartcards)
Brivo offers many options for contactless smartcards including Brivo Desfire EV2 smart cards as well as HID SEOS.

C. Support for wireless solutions
Brivo supports wireless lock solutions from major manufacturers including Schlage, Assa Abloy and Salto. Brivo supports four of the Schlage wireless lock series including the AD400, LE, NDE and Control. We offer "real time" control of these supported wireless locks that allow for lockdown, real time reporting and situational awareness.

D. Lockdown controls
There are three ways a lockdown can be performed with Brivo – through a mobile app, from a browser, or via a hardwired button.

E. Integration with Intrusion Detection Systems
Brivo offers wide support for a variety of IDS solutions.

F. Consideration for future Cloud deployment
Brivo is the innovator and global leader of cloud based access control and offers a proven true cloud platform.

G. Mercury Security or similar intelligent panels available to multiple manufacturers (panels supported by only one system software manufacturer are not acceptable)
Yes, Brivo supports the Mercury LP and EP 1502 intelligent controllers. We also manufacture three of our own control panels, the ACS6000/6008 series, ACS300 and ACS100.
III. Video Surveillance

A. Consider integration with Police Department
EEN is equipped to integrate with the police department in at least two ways. Since Eagle Eye does not license users, a user account may be added for officers that would need access. User accounts may limit cameras, layouts, and permissions. We also have a feature called First Responder that would allow a user to have an account but not be able to access until the admin activates the First Responder feature.

B. Local video recording server at each site
EEN recommends installing at least one server (Bridge or CMVR) at each location. Due to the cloud nature, they will all be accessible from one login. Segmenting the camera network in this way allows other locations to stay online in the event there is a network or power outage at other locations.

C. Redundancy/backup
The Eagle Eye Networks cloud data centers provide triple redundancy. If more is required, we recommend deploying CMVRs to store the video locally. At that point, the video will be stored locally once, and three times in the cloud.

D. Public monitor in admin waiting area.
There are three ways to achieve this with EEN depending on requirements. We have local display via http, local display via monitor, and can also provide a display station if full resolution and low latency is needed.

E. Support for video analytics.
With EEN, we can support analytics in four places: the camera, the Eagle Eye Bridge, the Eagle Eye Cloud, and the user’s browser. Currently we support Counting, Line Crossing, Intrusion, Loitering, and Tampering on the Bridge. We support elevated body temperature on the camera. We are constantly adding more support and gladly accept feedback on which ones are important to you.

IV. Video Recording

A. Standard video compression (H.264/H.265)
EEN currently supports H.264, analog, and TVI (HD over COAX).

B. 45 days recorded video
Eagle Eye Networks currently has cloud storage options of 2, 3, 7, 14, 30, 60, 90, and 180 days. We can also store for 1, 2, 3, or 5 years. Local storage options are up to one year.

C. Motion sense recording
Yes, by default EEN records video based on motion. We have many settings to control the sensitivity of the motion recording.

D. 5-10 frames per second recording rate
The EEN system supports 10, 12, and 14 frames per second. On certain cameras, we can support 30 or 60 frames per second.
V. Video Cameras

A. Vandal resistant camera housings that conceal direction of view
EEN supports thousands of camera models with the ability to add more models to the supported list. We rely on the camera’s ability to support ONVIF, MJPEG, and H.264. A list of compatible cameras can be found at https://www.een.com/support/camera-compatibility-digital-ip/.

B. Minimum 3 Megapixel resolution
EEN supports thousands of camera models with the ability to add more models to the supported list. We rely on the camera’s ability to support ONVIF, MJPEG, and H.264. A list of supported cameras can be found at https://www.een.com/support/camera-compatibility-digital-ip/.

C. Onboard storage
EEN supports thousands of camera models with the ability to add more models to the supported list. We rely on the camera’s ability to support ONVIF, MJPEG, and H.264. A list of supported cameras can be found at https://www.een.com/support/camera-compatibility-digital-ip/.
The Brivo/Eagle Eye Solution

Brivo Access is a physical security Software as a Service (SaaS) primarily targeted at commercial and multi-unit residential properties with employee, resident, and visitor populations for whom access needs to be regulated and recorded. A cloud hosted system such as Access is an excellent fit for geographically distributed applications that span multiple properties.
As shown above in Figure 1, there are seven major components to the operation of the Brivo Access service:

1. Brivo Access application (available via web browser or mobile application)
2. Brivo Mobile Pass credentials (optional)
3. Access control hardware installed on customer network used with physical credentials
4. Connections to other devices and IT systems
5. Brivo services are hosted with major cloud service providers
6. Brivo employees providing support, maintenance, and continuous monitoring.
7. Network communications via the internet.

These components share data across multiple platforms and networks in order to manage access control privileges, deliver alarm and event records and to provide other services such as software updates to control panels.

Brivo control panels systems are networked to the cloud through wired or wireless connection. Wired options include a built-in Ethernet port for connection to a corporate LAN, or broadband modem, or any other IP-based networking technology with connectivity to the Internet. Wireless networking options include a cellular network router or wi-fi adapter that comes with or is built into the control panel.

Brivo Access provides four main services; Physical access control for doors, elevators and gates, ID badging for employees, contractors and visitors, cloud storage, reporting, and management, and the ability to view and record video cameras.
This diagram is meant to convey Brivo’s flexible topology. The bottom blue squares represent three separate buildings with different equipment configurations. The panels at each site communicate through the cloud, outbound only, through port 443, authenticating via 256 bit AES encryption. On the top left of the diagram, you can see icons representing our ability to automatically provide a multitude of system alerts via email and SMS. These alerts are managed by a user configurable rules engine within the Brivo Access platform. The circles at the top right of the diagram depict how we communicate to third party systems via our open API. Through this Open API connection, we can synchronize card holders with other databases, as well as enable other platforms to consume events generated by Brivo Access. Some examples of third party integrations include visitor management systems, identity connectors, as well as office and health club scheduling, and management platforms.
In the center of the diagram above is the Brivo Access cloud and all the things maintained in that ecosystem. To the left are Internet Optimized Devices across multiple sites communicating back to the cloud. On the right, we can see third party integrations, mobile apps, and client connections, from anywhere with Internet access.

At the heart of Brivo’s physical hardware architecture are our control panels. Brivo offers multiple control panel options, each optimized for different usage scenarios. These control panels can be ‘mixed and matched’ as required in your application which gives you total flexibility in system design.
Below diagram illustrates the setup differences between a design built around the modular, expandable ACS6000/6008 control panel series, which allows up to 30 doors to be controlled by one main board, and a system using the small two-door ACS300 panels.

Brivo Access is a multi-tenant hosted application delivered via “Software as a Service” (SaaS) model. The Brivo Access system features a centrally hosted “cloud” data center which is accessible to both on-premise equipment and system administrators via a variety of private and public networks.

The Brivo Access application offers integrated access control, ID badging and support for web-hosted and recorded video and integration with a variety of on-site video recording platforms.

The Brivo Access application offers immediate provisioning of new devices on demand by the end user. All access control data be managed and maintained through a Web-based interface to the cloud data center. The system provides firmware installation capabilities to all connected control panels.

The Brivo Access solution is delivered as a multi-tenant, Software as a Service platform supporting tens of thousands of remote access control points in single, geographically redundant multi-tenant application architecture. The Brivo Access service allows access from any standard browser by authenticated users with proper credentials.

The Brivo Access solution has a demonstrated up time in excess of 99.95% or greater over the past five years of service. Brivo Access is internally redundant so that there is no single point of failure within the system. Brivo Access architecture also contains a geographically remote Disaster Recovery facility with a full copy of all applications, synchronized databases, and the ability to take over data processing operations in the event of a system failure at the primary facility.

The Brivo Access application protects Personally Identifiable Information (PII) through the use of AES 256-bit encryption for all communications.

New features for Brivo Access platform are released automatically on a quarterly basis at no incremental cost to customers. Pricing conforms to an on-demand model, with no up-front licensing expense.
The cloud to cloud integration between Brivo Access and Eagle Eye Networks VMS accounts is easily achieved through a secure, single sign-on method using a mutual REST API application. Eagle Eye cameras are then linked to Brivo ACS readers and ACS device input points within the Brivo Access interface. Multiple doors can be linked to a single camera field of view. Since the linking of VMS cameras and ACS devices is configured within the Brivo Access cloud account, there is no need for physical interfacing of VMS and ACS devices or pier to pier LAN configurations that are required with traditional Client-Server systems.

There are 3 key feature advantages once the integration is configured:

1. Viewing video clips from a Brivo Access browser or mobile device at the exact time when linked Brivo ACS events take place by clicking on the camera icon at each event.
2. Viewing live video from a Brivo browser or mobile device with option for remote door pulse unlock.
3. Viewing video clips from a Brivo browser or mobile device when the Eagle Eye camera detects motion.
Advantages of the Integration

A cloud service isn’t only about where the software lives; it’s really a top to bottom approach. Most successful cloud services in other industries have been designed and implemented specifically as a multi-tenant cloud service. Brivo and Eagle Eye Networks solutions have been developed by a team of focused engineers with backgrounds in developing large scale cloud systems. It’s a ground up creation designed to be multi-tenant, robust, reliable, and highly scalable. We believe nothing like this has been built before.

The overall approach is important because it’s not an attempt to retro-fit an existing on-premise physical security product into the cloud. As cloud services companies, Brivo and Eagle Eye Networks are dedicated to delivering service to our customers. This is an important distinction from product based companies. As a services company our goal is to ensure the end-to-end solution meets your needs.

Training and Support

Both Brivo and Eagle Eye provide system design training for sales and technical certification training at no charge to Brivo dealers and resellers. End user training is available as a fee for service by the Brivo Professional Services team. Technical support is available to dealers and resellers initially but both Brivo and Eagle Eye will provide support directly to end uses when needed.
Glossary

**ACS** - Access Control System associated with the Brivo ACS100, ACS300 and ACS6000/6008 panel systems.

**Active Directory** - Active Directory (AD) is a database and set of services that connect users with the network resources they need to get their work done. The database (or directory) contains critical information about your environment, including what users and computers are connected and controlling user admin permissions.

**AES** - The Advanced Encryption Standard (AES) is a symmetric block cipher chosen by the U.S. government to protect classified information. AES is implemented in software and hardware throughout the world to encrypt sensitive data.

**Cloud Computing** - According to the official NIST definition, “cloud computing is a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications and services) that can be rapidly provisioned and released with minimal management.

**EEN** - Eagle Eye Networks

**Field of View** - Field of view (FOV) is the maximum area of a sample that a camera can image. It is related to two things, the focal length of the lens and the sensor size.

**PII** - Personally Identifiable Information

**REST API** - A REST API (also known as RESTful API) is an application programming interface (API or web API) that conforms to the constraints of REST architectural style and allows for interaction with RESTful web services. ... An API is a set of definitions and protocols for building and integrating application software.

**SaaS** - Software as a service is a way of delivering applications over the Internet—as a service. Instead of installing and maintaining software.

**SOC 2, Type 2** - A SOC 2 Type 2 report is an internal controls report capturing how a company safeguards customer data and how well those controls are operating. These reports are issued by independent third party auditors covering the principles of Security, Availability, Confidentiality, and Privacy.

**SSO** - Single sign-on (SSO) is an authentication scheme that allows a user to log in with a single ID and password to any of several related, yet independent, software systems.

**VMS** - Video Management System

**Wi-Fi** – Wi-Fi (Wireless Fidelity) works off of the same principle as other wireless devices – it uses radio frequencies to send signals between devices on 2.4GHz and 5GHz frequencies. Brivo ACS controllers operate at 2.4GHz
Customer References

Brivo and Eagle Eye Networks solutions have been deployed in hundreds of public schools nationwide. If NMUSD would like to contact schools using our platform, please contact us directly to facilitate meetings. Due to the public nature of schools, and the private nature of physical security, we can provide references upon request, after verifying with the key decision makers within the districts.

Pricing

We are excited to provide budgetary pricing for your consideration. Brivo does not have an "MSRP" pricing schedule. Pricing is based on system configuration, deployment schedule, building construction, equipment placement, feature requirements and a host of other considerations. Brivo and Eagle Eye Networks systems are installed by an extensive network of certified security integrators. We’d like the opportunity to work with your key stakeholders to develop a comprehensive system design. Then, in partnership with our certified integrator(s), derive budgetary pricing for you.

There are industry standards you can reference via common search engines, of which some estimates are as much as $4,000 per typical installed access control door. This typically doesn’t represent the standard, multi-door, multi-site deployment, but using that "typical" should leave you plenty of room in your budget for upgrades.

Cloud subscription rates vastly vary based on system size, required integrations, retention and video resolution requirements, analytics and more. We’ve provided a link to Brivo’s Total Cost of Ownership webpage, and supporting documentation that generally describes savings when deploying a cloud based platform versus an on premise solution. Typical savings are 25% - 35% over a five year period. As mentioned earlier, we are excited to provide a budgetary price after meeting with your team and better understanding your needs.
Supporting Documentation

- Total Cost of Ownership calculator – [https://www.brivo.com/access-control-tco-calculator/](https://www.brivo.com/access-control-tco-calculator/)
- Brivo Mobile Pass - [https://www.brivo.com/docs/sales-sheets/Brivo-Mobile-Pass-Credential.pdf](https://www.brivo.com/docs/sales-sheets/Brivo-Mobile-Pass-Credential.pdf)
- Brivo Access Editions - [https://www.brivo.com/docs/sales-sheets/Brivo_Editions_Sale_Sheet.pdf](https://www.brivo.com/docs/sales-sheets/Brivo_Editions_Sale_Sheet.pdf)
- Brivo Total Cost of Ownership example - see attached document