TECHNICAL SPECIFICATIONS SECURITY SYSTEM

DIVISION – 28 ELECTRONIC SAFETY AND SECURITY

LEVEL 1\_\_28 20 00 ELECTRONIC SURVEILLANCE

LEVEL 2\_\_28 23 00 VIDEO SURVEILLANCE

LEVEL 3\_\_28 23 19 NETWORK VIDEO RECORDERS

**RASILIENT (NFDCloud) (for** Cloud Recording & Storage)

**Basis for design / specification.** Software and **or** equipment shall be from the technology listed **and or** approved for proposed use related to (NFDCloud) private services listed at [www.rasilient.com](http://www.rasilient.com). or approved equal.

Note: Additional Technology may be available based on design. Please check [www.rasilient.com](http://www.rasilient.com)

**Note: All specifications below are a guild. Your actual design deliverable shall be the aggregation of the specific need based on calculation of solution. All calculations must be delivered as part of the package.**

**VIDEO SERVER (PURPOSE BUILT APPLIANCEFOR CLOUD BASED RECORDING AND STORAGE)**

**1.0GENERAL**

1.1**Cloud Recording Configuration**

* Respondent **shall** provide edge devices and cloud storage utilized for a cloud storage solution.
* Respondent **shall** provide a private cloud configuration so end users have complete ownership of the recorded video.
* Respondent **shall** support many edge devices recording to the private cloud through their broadband.
* Respondent **shall** allow the edge devices in geographic locations (e.g., across states) connected by commonly available public networks for video recording (no latency impact).

1.2**Cloud Storage**

* Respondent **shall** provide a **highly scalable** cloud storage based on utilizing **object based storage** technology.
* Respondent **shall** provide an enterprise class object storage solution **without a single point of failure**.

1.3 **Edge Device and VMS**

* Respondents chosen / approved edge device **shall** support Windows OS and be able to run **different standards based / qualified VMS**.
* Respondents private cloud solution **shall** support recording video simultaneously from a **mix of qualified VMS** solutions from their associated edge devices.
* Respondents chosen cloud solution edge device **shall** be able to **limit the broadband bandwidth**for video recording upload to allow other/utilization usage at the edge sites.
* Respondents chosen cloud edge solution device shall be able to allow for **"no limit" bandwidth utilization for video recording upload during selected evening** hours of operation.
* Respondents chosen cloud edge solution device **shall** utilize an integrated **GUI**to illustrate the video **upload performance**, **network drop percentage**, and **local and cloud storage usage**.
* Respondents chosen cloud solution utilization of a qualified VMS, the edge device **shall** have a **GUI**to display the **video frame drop count**.
* Respondents chosen cloud solution edge device **shall** provide an **integrated** tool to check the broadband bandwidth.

1.4**Lossy Broadband**

* Respondents chosen Cloud solution **shall** allow for the broadband to be unavailable for hours to days (specified by the end users) without a loss of video.
* Respondents chosen Cloud solution **shall** allow the broadband to be lossy in packet transmission, meaning up to and including bi-directional random 10% packet drop, without losing video or affecting recording performance.

**2.0 Wireless and Cellular**

* Respondents chosen Cloud solution **shall** support wireless configuration with dynamic video upload algorithms to adjust to the signal strengths.
* Respondents chosen Cloud solution **shall** support mobile cellular configuration with dynamic video upload algorithms to adjust to the signal strengths.

2.1 **Video Encryption**

* Respondents chosen solution video **shall** have an option to be encrypted for security purposes.
* Respondents chosen solutions video encryption **shall** have no impact to the recording performance.
* Respondents chosen Cloud solution **shall** have the option to be **"zero knowledge,"** meaning the cloud has no knowledge for any encryption key information.
* Respondents chosen Cloud solution **shall** utilize a encryption key of at least 256 bit.

2.1.1 **Communications Security**

* Respondents chosen Cloud solution communicating between the edge to the cloud **shall** be fully encrypted.
* Respondents chosen Cloud solution shall utilize a encryption key at a minimum of 256 bit.
* Respondents chosen Cloud solution **shall** be based on the industry standard **TLS 1.2** or better.

2.1.1.1**Retention**

* Respondents solution **shall** allow for the edge configuration and its local retention and the cloud for long-term retention
* Respondents chosen solution **shall** allow extended retention in the cloud