

# ESTABLISH A UNIFIED MODERN ARCHITECTURE FOUNDATION FOR PUBLIC SAFETY

MOTOROLA PREMIERONE™

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# EXECUTIVE SUMMARY

Budget shortfalls, reduced staffing and expanded missions all add up to a public safety system increasingly in crisis. The right technology can help you deliver the service levels your community expects; however, most public safety applications were designed with a narrow, specific purpose rather than to work together on a common platform. Agencies that have tried to integrate the silos of information from applications with dissimilar technology platforms have had limited success.

This inability to bring together information from different applications can make it difficult to realize the full benefits of your investments. Workflow inefficiencies like the need to re-key the same information in different applications and duplication of information storage creates costly administrative burdens, while inaccurate information, inconsistent reporting and multiple points of system failure contribute to missed opportunities and can impact officer safety.

Today's dynamic public safety environment demands holistic enterprise solutions that work together with a common purpose and goal, complementing your operations, instead of needlessly complicating them. You need innovative software applications and a unified platform that improves response times, data accuracy and operational efficiencies while lowering expenses and administrative workload.

This white paper discusses PremierOne™, a public safety suite of CAD, Mobile, Records and Jail applications that delivers a single, unified platform for highly available, high-performance information sharing services. PremierOne replaces the industry standard of proprietary, non-redundant, discrete systems and provides an underlying architecture and common information sources for a new generation of applications. As a result, agencies gain enhanced application interoperability, real-time information access and sharing, along with high availability and optimized maintainability. With PremierOne, you can improve safety, enhance efficiency and reduce infrastructure costs.

## THE NEED FOR PREMIERONE PUBLIC SAFETY APPLICATIONS

Public safety agencies face a mounting set of challenges that threaten lives, critical infrastructure and property. Lessons learned from the September 11, 2001 terrorist attacks and natural disasters like Hurricane Katrina are prompting agencies to take action. At the local level, public safety agencies suffer from rising operational costs that outpace annual budgets, severely restricting their ability to expand resources and improve response time.

To confront the challenges of today and tomorrow, agencies look for ways to replace or supplement existing public safety applications with efficiency-boosting solutions that are cost effective, interoperable and scalable. New technologies provide several vital benefits to public safety agencies such as improving departmental productivity, enhancing rapid response, reducing operational costs and providing disaster recovery capabilities. As agencies look into new technologies, they should consider the four primary needs that form the cornerstone of a PremierOne™ application solution:

- **Services Oriented Architecture (SOA)**

Use of common software services allow seamless information sharing and interoperability across a wide range of public safety applications and users. In addition, application functionality enhancements and upgrades should occur without causing errors in dependent modules, improving maintainability.

- **High Availability and Redundancy**

Public safety applications demand 99.999% availability built into the combined hardware and software solution for maximum reliability. They must also support multiple site deployments to ensure redundancy during catastrophic emergencies.

- **Extreme Performance**

To save lives and to protect infrastructure, public safety applications must achieve peak performance. Raising the performance benchmark requires the solution to deliver fast response times, efficient transactions, productive user-load handling and support highly scalable applications.

- **Intelligent Systems Management**

The optimal solution requires system management capabilities that dwell at the core of the application architecture, enable proactive and reactive management and save time and money.

Motorola, working in partnership with Microsoft®, created an environment to enable agencies to boost efficiency, performance and cost-effectiveness through innovative PremierOne solutions.

Learn more in the following pages about the PremierOne application architecture that allows public safety agencies to stand ready for the next emergency – whether small or catastrophic.

## SERVICE ORIENTED ARCHITECTURE ENABLES SEAMLESS INFORMATION SHARING

### SERVICE ORIENTED ARCHITECTURE OVERVIEW

Public safety professionals are constantly in motion – saving lives and maintaining situational awareness depends on their ability to access and process information from a variety of applications and databases, regardless of location. In the public safety industry, seamless information sharing provides integration with multiple databases, which enables fast response to changes and allows technology to “work” for the unique needs of the mission critical worker.

Delivering the merits of information sharing, a Service Oriented Architecture (SOA) uses an implementation in which the common functionality partitions into organized services shared across one or more applications.

#### Increased Application Suite Maintainability

This use of common services allows the seamless sharing of business capabilities across a suite of applications and allows rapid functional enhancements without inducing errors within dependent modules. SOA also supports the incremental addition of new features to a customer installation without causing disruption across the entire infrastructure.

A fundamental principle behind SOA is that services expose business capabilities, with each service having a

well-defined service contract. A service contract specifies how a caller accesses functionality within a service in a manner independent of the platform, or the service implementation details. This approach allows the caller to access any implementation of the service that satisfies the service contract. Part of the service contract includes a definition of the security related aspects (for example, authorization and encryption), which are required between the callers.

This same approach also works to provide a straightforward and secure way to easily connect and integrate with external systems, creating a comprehensive solution platform.

In order to best illustrate some of the benefits of a SOA, consider a conventional distributed architecture as shown in Figure 1. This diagram illustrates a suite of three applications requiring integration. Built as a self-contained unit, each application contains shared objects and data within the encapsulation. The communication interfaces between the applications occur through Internet Protocol (IP) channels, but the format of messages, encryption and authentication use proprietary protocols.

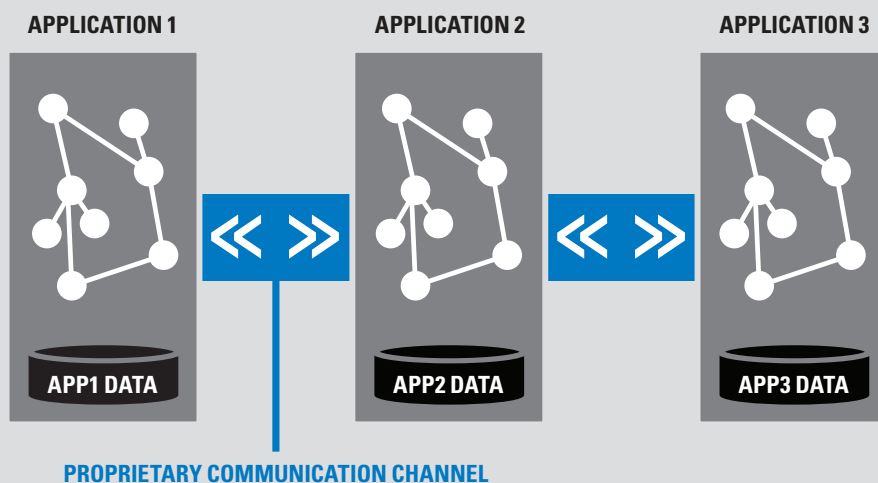


FIGURE 1 – Conventional Distributed Architecture

For comparison, Figure 2 reveals how a similar suite of applications layer and interface using a SOA. In this diagram, developers build a set of services at a base layer, which expose business capabilities. The rest of the functionality remains hidden. Industry standard protocols then expose the business services, allowing any appropriate application to share the services, regardless of the operating platform. Applications build on top of this framework and make calls into the set of services through the service contract. As seen in the case of Application 3, the layer exposes additional services to other applications or external systems.

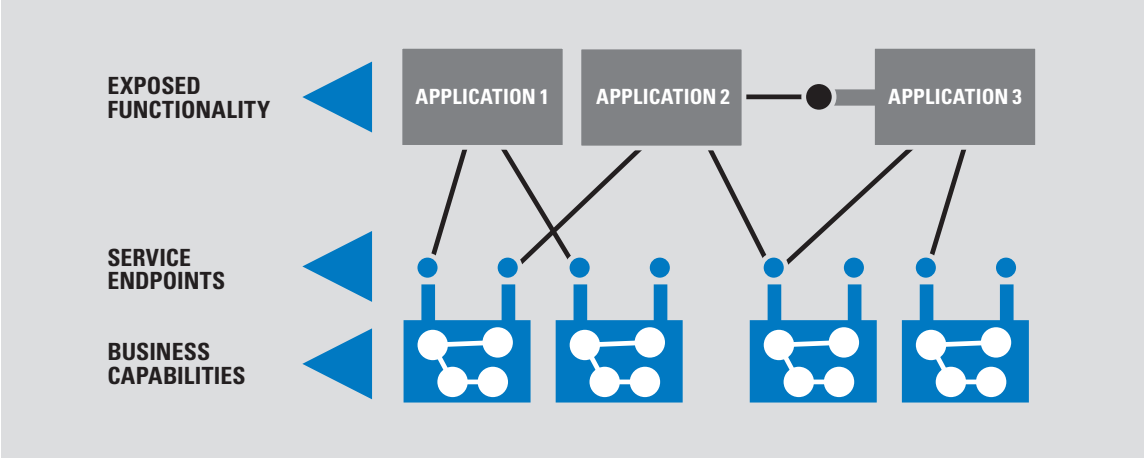


FIGURE 2 – Service Oriented Architecture

Table 1 shows several of the key advantages of a Service Oriented Architecture verses a conventional architecture.

| CATEGORY                     | CONVENTIONAL ARCHITECTURE   | SERVICE ORIENTED ARCHITECTURE  |
|------------------------------|---|--|
| COMPLEXITY                   | Designers build applications in monolithic manner, making them inherently more complex.                                   | Designers build applications on top of a framework of business capabilities, simplifying application complexity.   |
| MULTIPLE PLATFORM SUPPORT    | Each new platform introduced adds complexity to adds complexity to point-to-point communications between applications.    | As long as platforms support industry standards for web services, no extra complexity exists around platform interoperability.   |
| DUPLICATION OF BUSINESS CODE | Duplicate code may exist within each application, increasing complexity, risk of faults and maintenance costs.            | General business capabilities expose as services, reducing cases in which applications contain duplicate code.   |
| UPGRADE SCENARIOS            | Application upgrades become complex, since applications can contain proprietary, fault-prone interfaces to other systems. | Service upgrades generally occur independently as long as the system maintains the well-specified service contract.  |
| NEW FEATURE ENHANCEMENT      | Adding new business features requires modifying application or creating entirely new applications.                        | Adding new capabilities simply requires exposing additional services. Once services are exposed, the system modifies all applications on a defined schedule to take advantage of new features. |

TABLE 1 – Comparison between Conventional Architecture and SOA

## PREMIERONE – BUILT ON A SERVICE ORIENTED ARCHITECTURE

As detailed in the previous section, Service Oriented Architecture offers several advantages when compared to a conventional distributed architecture. Built on the fundamental premise of business service exposure, sharing and service contracts, PremierOne™ takes full advantage of SOA's benefits. At the core level, the suite provides a set of common services for all PremierOne applications including:

- Geographical information system (GIS) services
- Messaging services
- Security services

On top of these common services, application modules provide functionality for public safety needs. Each application module consumes services provided by the common service layer as well as exposes higher-level services usable by other systems. For example, the Computer Aided Dispatch (CAD) system uses services from GIS for mapping-based capabilities and exposes services that allow mobile systems to create field-initiated incidents.

Figure 3 shows how PremierOne implements SOA.

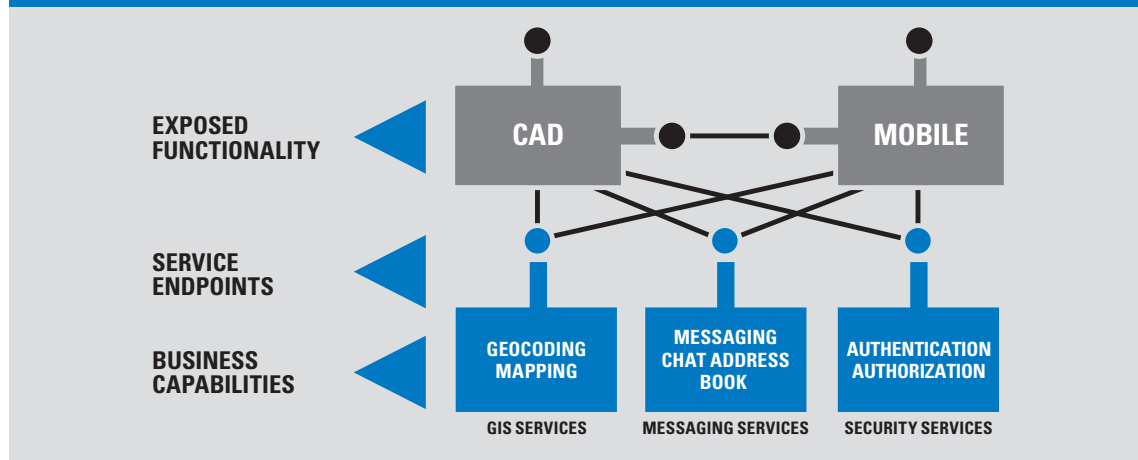


FIGURE 3 – SOA as Implemented in PremierOne

The PremierOne™ SOA foundation enables several deep benefits for public safety such as:

- **Improved Legacy System Integration Reduces Total Cost of Ownership (TCO)**

Adherence to industry standard Web service protocols enables seamless public safety application integration with existing systems, regardless of the hosting platform. This allows agencies to take advantage of installed technology investments, reducing both acquisition and reoccurring expenses.

- **Add Applications on Your Schedule**

PremierOne enables incremental expansion. Start with one or more PremierOne applications (CAD, Mobile, Records or Jail) while continuing to use existing legacy applications. This approach allows the adoption of PremierOne applications over time, reducing disruption, improving efficiency and lowering training overhead.

- **Highly Scalable to Grow Agency Efficiency**

As an agency grows and operations change, additional capacity and new functionality can be added over time to meet evolving demands.

- **Powerful Flexibility and Extensibility**

System administrators can update or add new services without performing major application releases. This feature allows the quick, efficient update of PremierOne clusters in order to support additional devices, new external systems or expand compliance to new information exchange standards.

## PUBLIC SAFETY DEMANDS HIGH AVAILABILITY

### PREMIERONE GOES BEYOND FIVE NINES RELIABILITY

A common term used throughout the industry, five nines, means that a high availability configuration experiences no more than 5.26 minutes of “unplanned” downtime per year; it’s important to consider, however, that this can include “planned” downtime lasting longer than 5.26 minutes. Taking the five nines redundancy benchmark to a next level with a significant milestone, PremierOne™ allows for no more than 5.26 minutes of “planned” downtime per year by implementing the following pioneering design considerations:

- All system hardware components provide the highest level of redundancy both internally and externally
- Operating system (OS) and application-level services use clustering to achieve maximum throughput and availability
- Application components implement catch/retry blocks that trap errors and restart process execution for optimal performance and reliability
- Advanced features including SQL Server® High Protection Mirroring, enabling fast, seamless database failover (replacement of the primary database server with the standby system)
- Support for multiple site deployment, providing a wide range of redundancy scenarios

Figure 4 demonstrates the standard PremierOne high availability configuration and associated infrastructure.

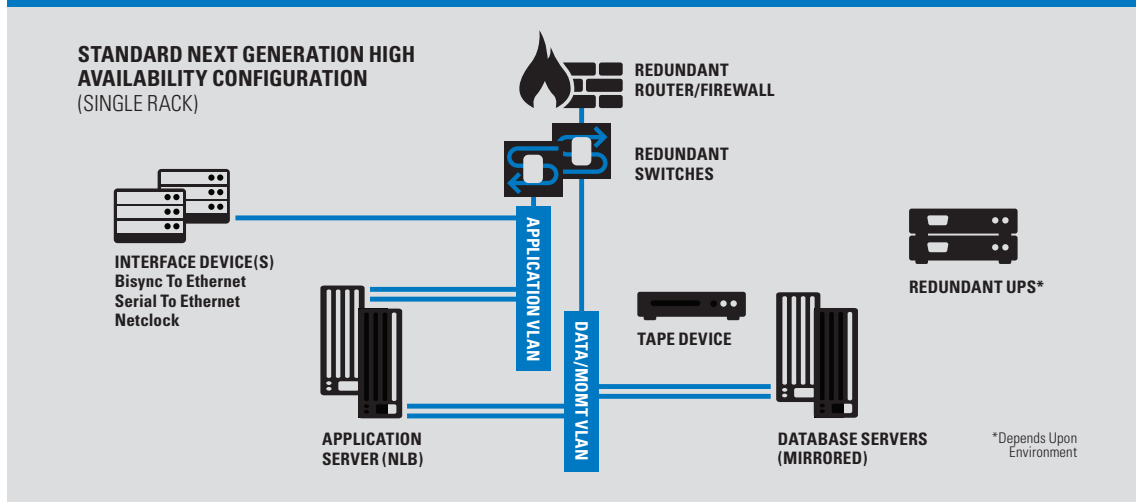


FIGURE 4 – PremierOne Standard High Availability Configuration

Designing PremierOne to achieve the highest reliability was a major objective during architectural development. Throughout the design process, Motorola engineers performed extensive modelling, simulation and testing of complete system configurations (hardware, OS, network and applications) to achieve the best possible Mean Time to Failure (MTTF) and Mean Time to Recovery (MTTR) and provide PremierOne’s five nines availability.



## REDUNDANT HARDWARE ENHANCES SYSTEM AVAILABILITY

To increase total system availability, PremierOne™ uses only high-availability hardware configurations. Typical system configurations include servers and storage, local area network (LAN) and wide area network (WAN) infrastructure, power distribution and peripheral and general communication interfaces. Table 2 lists an overview of typical PremierOne components and their related high availability attributes.

| COMPONENT                                      | KEY HIGH AVAILABILITY ATTRIBUTES   |
|--|--|
| <b>REDUNDANT SERVERS WITH REDUNDANT ARRAYS</b> | Redundant array of independent drives (RAID) storage, redundant power supplies, teamed network interfaces and hot-swappable components for reduced system downtime |
| <b>LAN</b>                                     | Redundant network switches   |
| <b>WAN</b>                                     | Redundant firewalls with multiple network paths  |
| <b>POWER</b>                                   | Redundant uninterruptible power supplies (UPS) and power distribution units (PDU)  |

TABLE 2 – PREMIERONE COMPONENTS AND HIGH AVAILABILITY ATTRIBUTES

The system deployment environment stands as an important consideration for achieving high availability. Although implemented to meet 99.999% availability requirements, the PremierOne system must reside in an environment that provides specific high availability aspects in order for the entire solution to achieve 99.999% availability. Some examples of environmental aspects include redundant power distribution and backup, multiple cooling sources and a fault-tolerant networking and communication infrastructure.

## AT THE CORE – SYSTEM-LEVEL APPLICATIONS

Poorly written applications can degrade overall solution reliability – reducing productivity and ultimately driving up total cost of ownership (TCO). Designed and simulated with mission critical needs in mind, PremierOne was developed from the ground up to be highly available. The software application architecture implements current best practices for supporting high availability environments such as:

- Advanced exception handling used throughout all PremierOne applications
- Automatic database failover handling for all application calls into the database

- Enhanced memory leak protection through automatic memory management
- Extensive logging of system, network and application activities and errors

To reduce the risk of a single point of failure, the PremierOne is designed to host critical application components on load-balanced servers, PremierOne databases are replicated using Microsoft® SQL Server® native mirroring technology.

## NETWORK LOAD BALANCING HELPS DRIVE HIGH AVAILABILITY

PremierOne™ uses the proven concept of Network Load Balancing (NLB) clustering to distribute processes and data while increasing application availability. Examples of applications designed to support NLB include CAD and Mobile solutions. During operation, each member of the NLB cluster handles requests from clients whenever configured for load balancing. If a node fails, the remaining node(s) continue to perform all operations seamlessly, and without user intervention.

PremierOne's NLB and systems management modules work together to support high availability. The systems management module provides health and performance checking of services on each node in the cluster. When systems management detects a NLB component failure, it automatically takes the server out of the cluster and carries out automated recovery. When the node becomes operational again, the systems management module loads the recovered node back into the cluster. While the node remains absent from the cluster, the remaining nodes continue to handle ongoing client requests and maintain system availability.

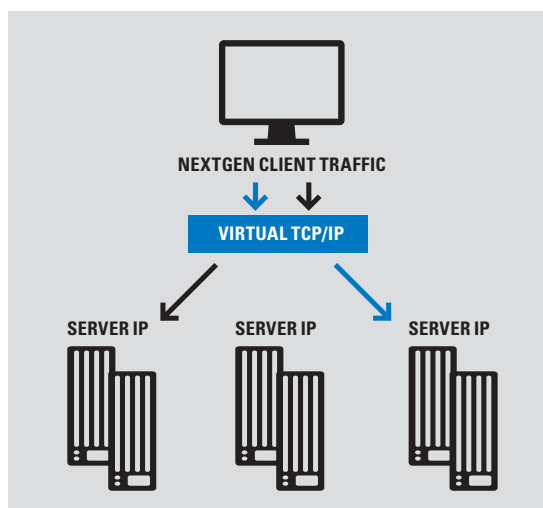


FIGURE 5 – Network Load Balancing

## DATABASE MIRRORING ENABLES RAPID DATA FAILOVER

Microsoft® SQL Server® database mirroring resides at the core of PremierOne's high availability database technology. Implemented at the database level in Microsoft® SQL Server®, mirroring provides a powerful, easy to deploy data redundancy and high availability solution. The components of a mirrored database server include a principle server that handles transactions, a mirror server that replicates transactions, and a witness, which is involved in determining the principle mirror if a failure occurs.

When a fault occurs on the principle server, the failover to the mirror occurs rapidly since the mirror already contains a complete and current database ready for use. PremierOne applications contain embedded retry code, and support for the client to automatically failover. This allows seamless client connection to the new principle server. As a result, transactions continue to process without interruption. Figure 6 demonstrates the roles and high-level interactions within the PremierOne mirroring solution.

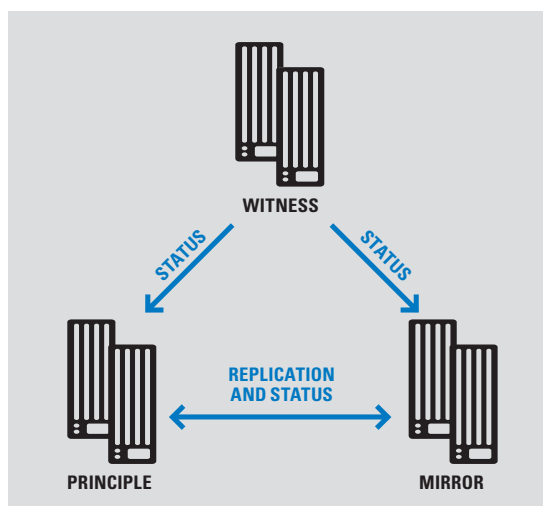


FIGURE 6– Database Mirroring

## MAXIMIZE REDUNDANCY WITH BACKUP SITES

Beyond saving lives, protection of critical infrastructure and information remains at the forefront of the public safety mission. The Hurricane Katrina disaster stressed the need for system and data redundancy beyond the primary site. With these factors in mind, PremierOne™ supports multi-site configurations, enabling geographic high availability. All system components maintain seamless failover to a hot standby location, which allows continued access to the system in the case of catastrophic service interruption at the primary location.

PremierOne's multi-site design provides mirroring of key services and application data in real time from

the primary site to the backup site, which helps to ensure data and configuration continuity. If a disruption of service occurs at the primary site, a system administrator initiates a failover to the secondary site through the systems management console, allowing processing to resume. PremierOne includes various levels of multi-site availability including the use of certified asynchronous replication technologies as well as synchronous storage area network (SAN)-based solutions for installation in the most demanding of environments.

## RAPID RESPONSE DEPENDS ON HIGH PERFORMANCE SOLUTIONS

### KEY PERFORMANCE METRICS FOR PUBLIC SAFETY SYSTEMS

When lives and infrastructure are at risk, every second counts. Rapid emergency response depends on public safety applications that meet the highest standards of performance. Each step of the emergency response cycle including incident reporting, dispatching and alerting costs valuable time – and systems must have enough peak bandwidth to handle catastrophic emergencies. When designing public safety applications, five critical performance metrics come into focus:

- **Fast Response Time**

During an emergency or a disaster, agencies must quickly deploy the appropriate resources (law enforcement, fire/rescue or emergency medical services) to the incident scene. Real-time, reliable communications between dispatchers, first responders and command units help streamline the emergency response cycle.

- **Robustness for Handling High Volume**

With the large volume of emergency requests that occur during disasters, agencies must have a robust public safety system that will not collapse when request loads spike unexpectedly.

- **High User Capacity**

During a major disaster, all or most of the emergency personnel remain on duty. To support this fact, public

safety systems must have enough capacity to support peak numbers of users as well as the normal day-to-day average number of concurrent users.

- **High Throughput**

Beyond capacity (number of users), data throughput is the amount of information the network can carry simultaneously and reliably. For any level of emergency or disaster, public safety systems must maintain sufficient bandwidth to ensure reliable Quality of Service (QoS) for all users.

- **Scalability**

With the mission of the public safety sector growing, the systems that agencies rely on require flexibility for future expansion.

## **PREMIERONE HIGH PERFORMANCE DESIGN STRATEGY**

PremierOne™ is a result of an ongoing powerful alliance between Motorola Solutions and Microsoft® to create an innovative, industry-leading solution. This unique alliance gives each team ready access to each other's architects and development resources. The suite benefits from decades-long-performance design knowledge from Microsoft and our 80 years of expertise developing, deploying and supporting high-performance public safety solutions from Motorola. PremierOne delivers the integration, reliability and flexibility public safety agencies require while driving down support load and overall TCO.

Meeting this challenge, PremierOne leverages stringent design best practices for high performance, highly scalable applications. These practices include deep instruction and data pipelining, broker, proxy and factory automation principles. Built for the demands of today and beyond, PremierOne allows incremental growth in capacity through horizontal scalability. Specifically, agencies can increase capacity by adding servers to the primary cluster, or by adding completely new application clusters. In some instances, agencies can increase system capacity through vertical scalability by simply adding additional central processing unit (CPU) modules to the servers.

During initial architectural development, Motorola and Microsoft conducted extensive performance simulation modeling and lab testing to optimize the design for high throughput and fault tolerance. Detailed simulations and stress tests allowed designers to understand the suite's performance across a wide variety of scenarios – including small rural police departments and large metropolitan first responder systems.

Simulations and lab testing characterized various capacity and throughput workloads ranging from general mission to catastrophic events. In addition, designers performed sensitivity scenario testing to evaluate and optimize the system in cases where the actual workload spiked higher than what the customer initially forecasted. This approach led to a fault tolerant, near self-healing PremierOne that continues operating even when unexpected usage loads occur. Public safety IT teams continuously look for ways to improve system performance and efficiency. To help fine tune the system infrastructure, administrators can use PremierOne's systems manager to search for trends, monitor and tune cluster performance as workload and usage profiles fluctuate.

## HIGHLY SCALABLE ARCHITECTURE PROVIDES LONG-TERM FLEXIBILITY

PremierOne's flexibility enables applications tailored for the unique mission of individual public safety agencies. High scalability allows agencies to grow their application suite incrementally with respect to both present and future needs. Primarily, horizontal clustering increases system capacity through the insertion of additional servers in a cluster with capacity shortage, or by adding a new full cluster to the configuration. Private sector data centers use a similar approach to increase the RAID storage capacity by adding new disks into the array.

Figure 7 demonstrates horizontal scalable clustering. Using this form of clustering to increase capacity allows agencies to add resources only as the need arises. For example, public safety agencies can add capacity as annual fiscal budgets roll over, when jurisdictional responsibility increases or when the mission expands.

Not all systems and applications allow horizontal clustering. Typical examples include database applications and environments with limited enclosure space. In these situations, vertical clustering becomes the preferred method. By definition, vertical clustering occurs when support personnel add additional CPUs to servers with capacity shortages.

Figure 8 shows how to increase system capacity through the vertical clustering approach. To benefit from CPU performance improvements such as large direct-addressable memory space and enhanced parallel processing, vertically clustered systems such as Microsoft® SQL Server® use 64-bit processors whenever possible. As in the horizontal clustering case, vertical clustering.

PremierOne systems stay optimized for the specific application, and use only high-performance, high availability hardware platforms. PremierOne supports a wide range of public safety systems with the ability to scale as needed from a small, single-site installation to a large, multiple-site environment. This flexibility, combined with other key performance attributes, makes the PremierOne a cost-effective, high-performance solution for public safety application needs.

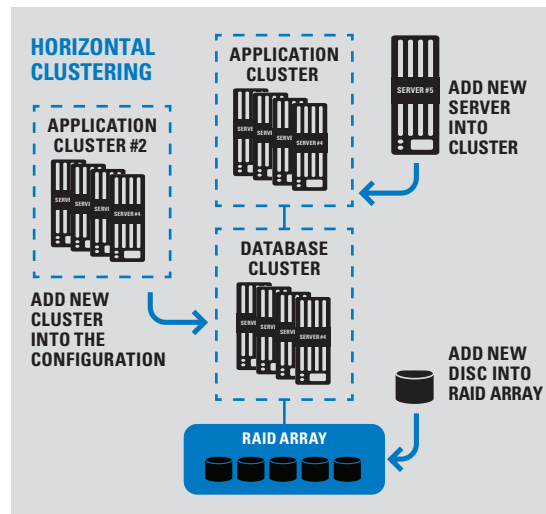


FIGURE 7 – PremierOne Horizontal Clustering

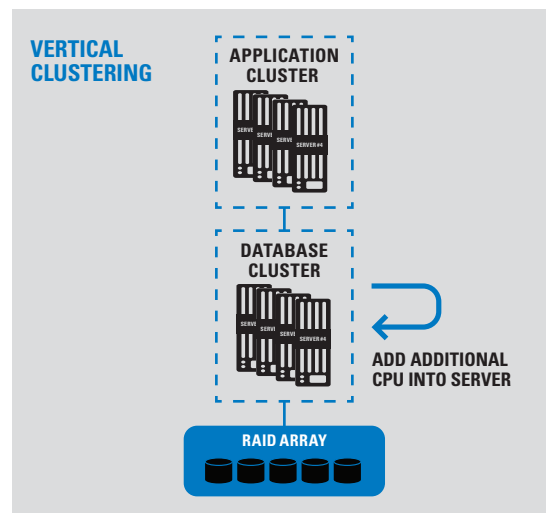


FIGURE 8 – PremierOne Vertical Clustering

## ADVANCED SYSTEMS MANAGEMENT BOOSTS AGENCY EFFICIENCY

In systems as vital as those needed for public safety, the ability to easily streamline the management of each component remains essential. A cutting-edge, PremierOne™ set of applications requires management capabilities that form the core of the architecture, enable proactive and reactive functions and reduce system administration workload.

Designed from the ground up to integrate intelligent systems management technology, PremierOne provides advanced proactive and reactive management capabilities for each system component.

Figure 9 illustrates a high-level view of systems management integration with key components including the hardware, operating system and applications.

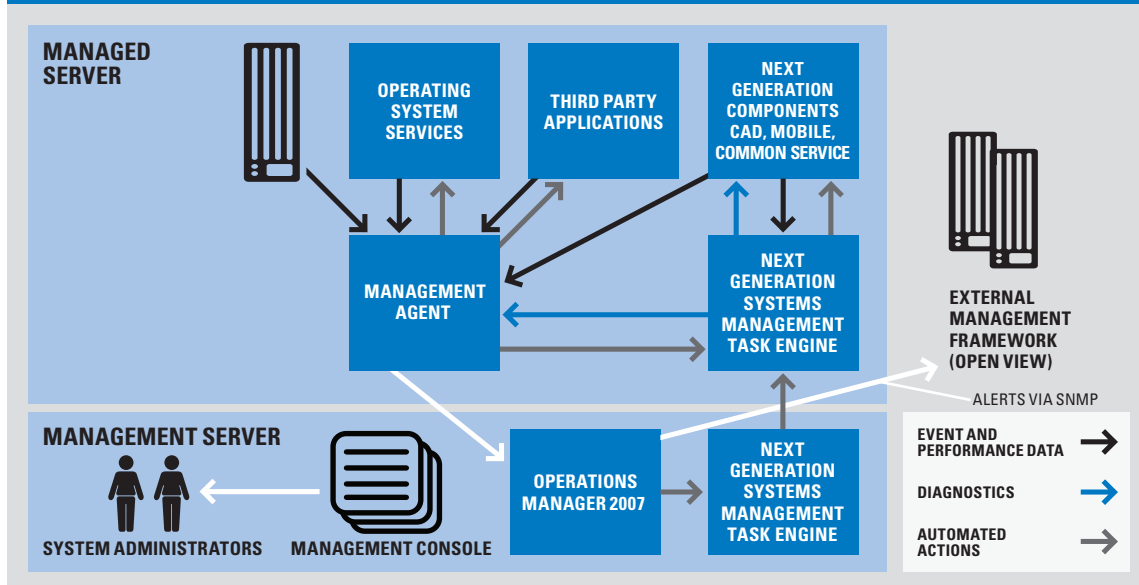


FIGURE 9 – PremierOne System Management

Embedding advanced system management capabilities into PremierOne enables several unique features and benefits:

- Integrated systems management functions proactively search for, and help correct potential issues and system bottlenecks before they become problems, thus increasing system availability and boosting overall performance.
- Systems management continuously monitors the state of the suite for problems, and automatically takes action to isolate and correct system faults, further boosting availability.
- Intuitive and comprehensive diagnostic information reduces troubleshooting time and effort, lowering reoccurring maintenance costs.
- Administrators save time with an intuitive graphical user interface (GUI) portal that provides a single point of access to typical systems management functions.
- Advanced reactive systems management provides automated fault recovery, and built-in intelligence for updating software without affecting overall cluster availability.
- Reduced system administration requirements enable superior return on investment (ROI) and drives down TCO.

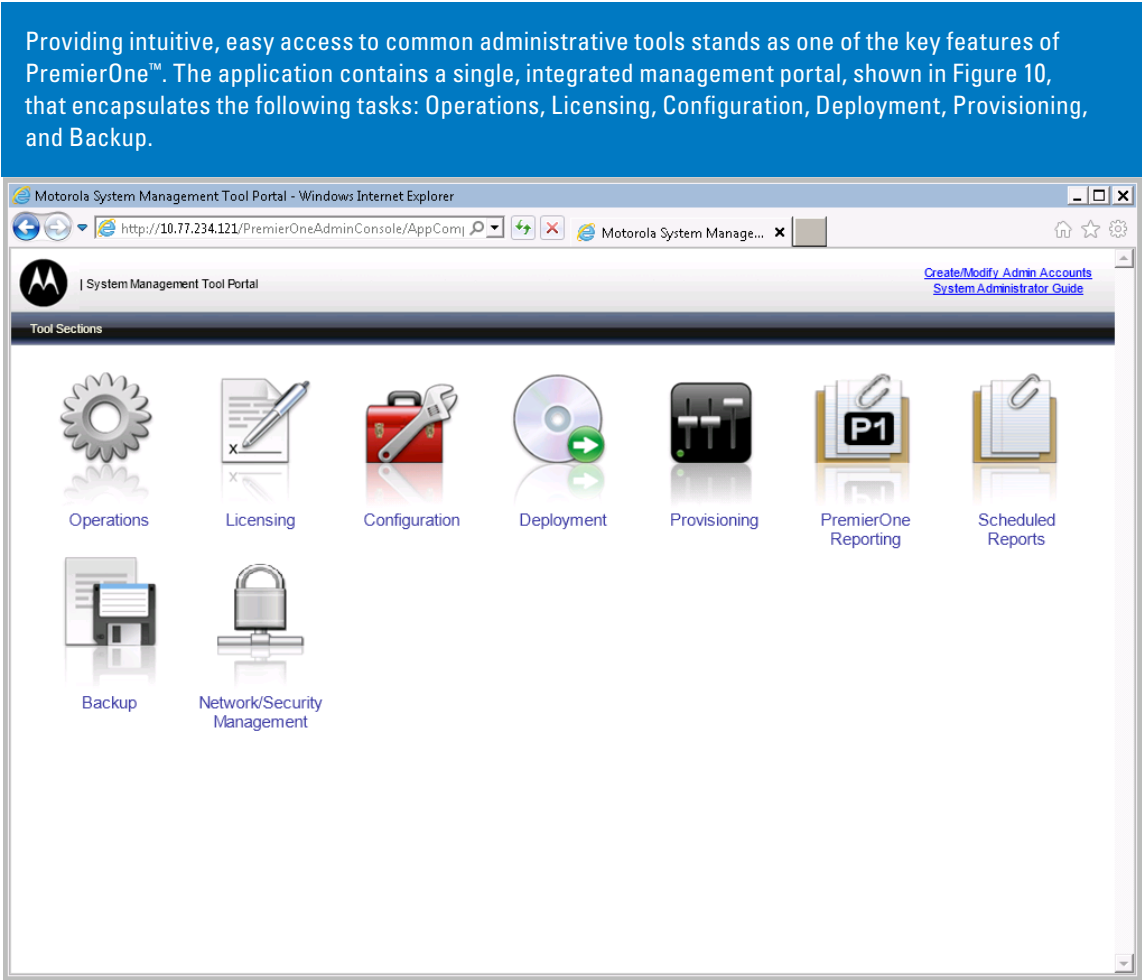


FIGURE 10 – System Management Portal

Motorola developed PremierOne’s systems management components by leveraging and extending the capabilities of Microsoft® System Center Operations Manager 2007. Each hardware and software component of PremierOne contains either a native- or suite-specific systems management component. Through integration, these components present a comprehensive, unified-health

| INTEGRATED SYSTEMS MANAGEMENT | KEY HIGH AVAILABILITY ATTRIBUTES   |
|-------------------------------|--|
| APPLICATION                   | PremierOne management components that provide comprehensive system diagnostic and performance information  |
| MICROSOFT SOFTWARE            | Includes management for Microsoft components such as SQL Server® and Active Directory®   |
| THIRD-PARTY SOFTWARE          | The PremierOne systems management module manages all PremierOne applications and tightly integrated, third-party software components                   |
| HARDWARE                      | Hardware integration completes the systems management solution by providing preventative diagnostics and monitoring of the suite’s hardware components |

TABLE 3 – PremierOne Integrated Systems Management

## THE CRITICAL NEED FOR PROACTIVE SYSTEM MANAGEMENT

Mission critical tasks in public safety agencies demand ready and reliable applications. System crashes, slow database retrieval and application downtime can degrade effective emergency response – putting lives and infrastructure at risk. With proactive systems management, IT experts can identify and resolve potential issues before they become problems, simplifying administrative tasks and workload, and increasing overall system reliability.

Leveraging extensive Motorola expertise in delivering innovative solutions to public safety agencies, PremierOne™ contains intelligent, near self-healing proactive systems management solutions including:

- Automatic and user-configurable trend tracking such as processor, network and disk utilization, response times and report log analysis
- Advanced diagnostic capabilities that identify and resolve hardware, software and integration issues
- Extensive OS, database, native applications and third-party applications component monitoring and reporting
- Console and email notifications report system and problem status and resolution while hiding the complexities of the system
- Database management utilities that automatically purge stale information while maintaining optimal data throughput and system performance
- Intelligent system-wide backup and restore

## REACTIVE MANAGEMENT ENABLES AUTOMATED RECOVERY

Built-in automated recovery stands as a key innovation within PremierOne's system management portfolio. When one of the system's predefined monitors detects a fault, automated recovery routines take the appropriate response to recover the failing software component. As a result, most failures that once required system administrator intervention will automatically be resolved, with the only notification being a report entry that the system detected and recovered from the problem.

Consider the following real-world scenario. Because mobile public safety applications rely on high availability software to service application requests, a single failure can jeopardize the mission and first responder safety.

The PremierOne system management module detects the fault and restarts the application or reboots the server, automatically bringing the services back online. When coupled with PremierOne's high availability features, failures that might have resulted in downtime with other application architectures are now resolved automatically. As a result, the suite represents a significant advance versus traditional systems that only support high availability for the hardware and OS.

## REDUCE DOWNTIME WITH INTELLIGENT UPDATES

Public safety application updates must occur without affecting system availability. Within PremierOne, an integrated software deployment capability generates notification of pending updates to all servers and workstations, then deploys and installs each update. The system management module leverages the high availability components of the suite to implement system-wide changes without affecting overall availability.

The task engine removes individual systems from service, applies all updates, verifies the updates and places the system back into service while the other servers continue handling user requests.



## PREMIERONE MEETS THE PUBLIC SAFETY CHALLENGE

This white paper has shown how the PremierOne™ public safety applications suite delivers seamless information sharing, high availability and high performance flexibility that public safety agencies require. Through the innovation of SOA business services sharing, agencies gain improved connectivity with external systems and increased application suite maintainability – reducing infrastructure costs and enhancing productivity.

PremierOne's use of highly available, high-performance technologies such as mirroring, NLB and clustering empowers public safety agencies with the operational efficiencies and improved response that superior redundancy, reliability and throughput can deliver. Plus, intelligent systems management provides a high level of proactive and reactive management automation, driving down overall administrative workload, support costs and training requirements. With PremierOne, you can unify and streamline your operations to create efficiencies today while laying the foundation for tomorrow.

To learn more about how the PremierOne platform can help you simplify your workflows and optimize your operations, contact your Motorola representative or visit [motorolasolutions.com/integratedcommand](http://motorolasolutions.com/integratedcommand).

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