\Orchestrating a brighter world **NEC**

Invest in Reliability

Keeping critical systems operational is crucial. Imagine the potential risks faced by healthcare providers during downtime of IT systems. Account provisioning and identity management during patient care are fundamental processes. Downtime or slow response during account provisioning of clinical applications or data can delay, or even prevent, timely patient care, and diminish patients' confidence. Downtime with critical applications has wide-ranging economic, security and legal consequences. During a failure, all businesses experience negative consequences, but the impact on healthcare providers is particularly harmful.

Productivity and caregiving come to a standstill when communication is interrupted. Confidential healthcare records must be secured and handled in compliance with regulatory mandates. Failed IT systems may inhibit compliance. Additional costs are incurred to remediate the problem, as well as the risk of penalties. Most importantly, downtime of critical healthcare systems ultimately can affect a person's life.

Unparalleled High Availability from NEC

NEC's dependable high availability solutions actively prevent application downtime and devastating data loss. Potential problems can be detected and proactively addressed before downtime interferes with patient care.

Beyond potential hardware, software, or network failures, temporary system outages occur during planned maintenance and upgrades. System disruptions can also result from unexpected natural disasters or fire. NEC offers solutions that nearly eliminate interruptions resulting from planned and unplanned downtime. High availability solutions from NEC provide wide coverage to monitor potential points of failure. Designed to address the stability demands of the healthcare industry, NEC's high availability solutions can be tailored to the unique needs of most environments.

Benefits to All Stakeholders

Healthcare Executives:
• High availability solutions enhance the quality of care and service for patients, as well as backend operations.
• Behind-the-scenes management activities working with pharmaceutical and medical device companies, as well as payer and insurer firms, directly impact revenue generation. NEC's high availability solutions can ensure systems remain operational to sustain these business engagements.
• Investment in a high availability solution costs far less than dealing with "fire drills" to manually correct a critical system failure. The cost of adopting a high availability solution should be assessed against the risks of poor quality care and violating regulatory requirements.
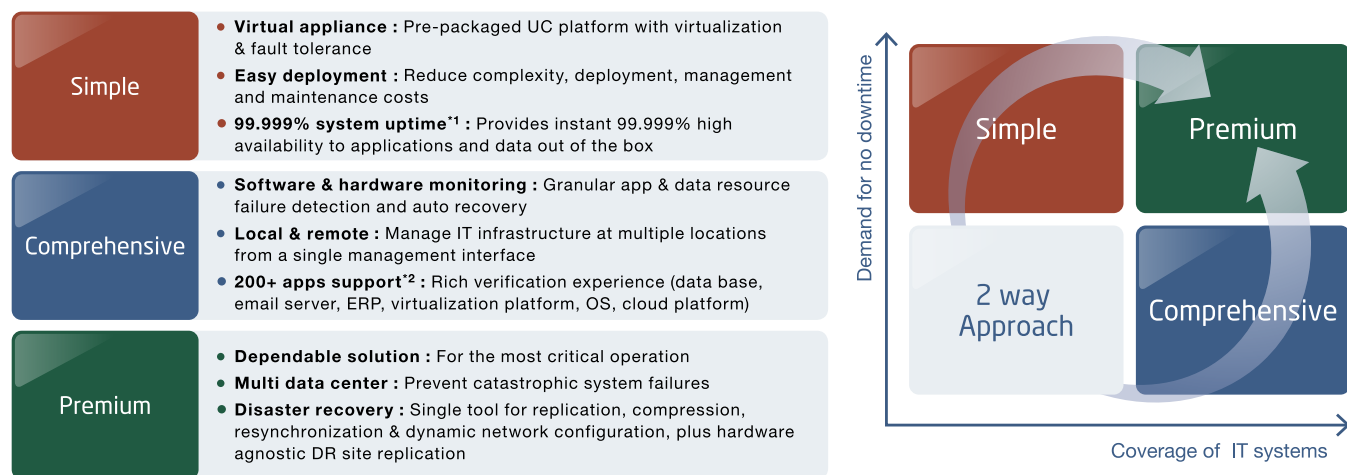
IT Managers:
• For IT managers who desire fast and easy solutions to handle a complicated recovery system, NEC's high availability solutions offer a starting point by simply applying hardware solutions.
• To monitor the point of potential failure over a wide area, NEC offers comprehensive software solutions that can be layered on top of the hardware to provide even higher levels of protection.

Physicians & Patients:
• The true value of high availability is ensuring stable operations to support the caregivers. NEC's high availability solutions give doctors, nurses and all clinical support teams the peace of mind that critical applications and patient data will be available when needed. The result is an empowered workforce where employees have real-time access to the information they need and the freedom to communicate however, whenever and wherever they work.

With a wide range of IT technologies and over 100 years' experience in the IT industry worldwide, NEC Smart Enterprise Solutions for healthcare will empower IT divisions, executives and physicians to realize better patient satisfaction and uptime by preventing risks in advance.

NEC's flexible choice to start high availability solutions

Simple
• **Virtual appliance :** Pre-packaged UC platform with virtualization & fault tolerance
• **Easy deployment :** Reduce complexity, deployment, management and maintenance costs
• **99.999% system uptime**[*1] **:** Provides instant 99.999% high availability to applications and data out of the box

Comprehensive
• **Software & hardware monitoring :** Granular app & data resource failure detection and auto recovery
• **Local & remote :** Manage IT infrastructure at multiple locations from a single management interface
• **200+ apps support**[*2] **:** Rich verification experience (data base, email server, ERP, virtualization platform, OS, cloud platform)

Premium
• **Dependable solution :** For the most critical operation
• **Multi data center :** Prevent catastrophic system failures
• **Disaster recovery :** Single tool for replication, compression, resynchronization & dynamic network configuration, plus hardware agnostic DR site replication

Demand for no downtime

| Simple | Premium |
| 2 way Approach | Comprehensive |

Coverage of IT systems

*1 An average of less than 6 minutes downtime per year. This is a theoretical value calculated by NEC. The actual availability of any particular system may differ. *2 Verification experience with 200+ applications as of April, 2016.

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High Availability Vital for Optimal Patient Care

Smart Enterprise Solutions for Healthcare

Have you invested in reliability?

NEC high availability solutions empower healthcare providers to prevent interruptions that affect quality patient care.

Market Trend

The healthcare industry is in the midst of a digital transformation. Dramatic innovations have revolutionized healthcare practices and our way of life.

Widespread adoption of electronic healthcare records (EHR), hospital information systems (HIS), picture archiving and communications systems (PACS), and other clinical and administrative applications has modernized how patient care is delivered. These indispensable systems have also increased the industry's dependence on its supporting IT infrastructure.

Advances in healthcare systems also offer enhanced preventive care for patients. More than fitness trackers and smartwatches, a new category of health monitors extends the wearable flavor of applications to go beyond basic step and calorie counting. This next generation of sensor options enables a fresh approach to preventive care by measuring core health data, such as blood pressure, heart rate, glucose levels, vision quality, sleep patterns, and body temperature.

The Challenge: Meaningful Use of Data

While state-of-the-art smart technologies have enhanced patient care and the availability of relevant information, they have also introduced a new dilemma. This new era of information gathering now presents the challenge of using the vast amounts of data in a meaningful way.

Mobility enhances the effectiveness of healthcare providers as it seamlessly connects data, applications, and people anywhere. By aggregating, integrating and analyzing the data generated by patients and healthcare providers, doctors can diagnose patients more accurately. Nurses are able to create care plans more efficiently by having a complete overview of the patient's diagnosis and treatment recommendations.

Both patients and healthcare providers benefit from improved quality care, positive patient experiences, and lower overall healthcare costs. For this "win-win" vision of a smart enterprise for healthcare to be realized, downtime of IT systems must be prevented.

At the Heart: Quality Care

A reputation for delivering exceptional care is the highest priority for healthcare practices and hospitals. Being recognized as a high quality healthcare provider is achieved by consistently delivering the best possible care. Maintaining a high standard of care instills confidence in current patients while attracting new patients.

The entire patient experience can define the reputation of a healthcare provider. In addition to the work carried out by doctors and nurses, patient services, such as admissions, discharges, transfers, scheduling and prescriptions, must also offer the same level of personalization and efficiency. Patients expect fast, professional service from the time they arrive to when they depart.

IT systems now play a vital role in delivering high quality healthcare and services. A countermeasure to minimize the risk of system downtime is growing in importance.