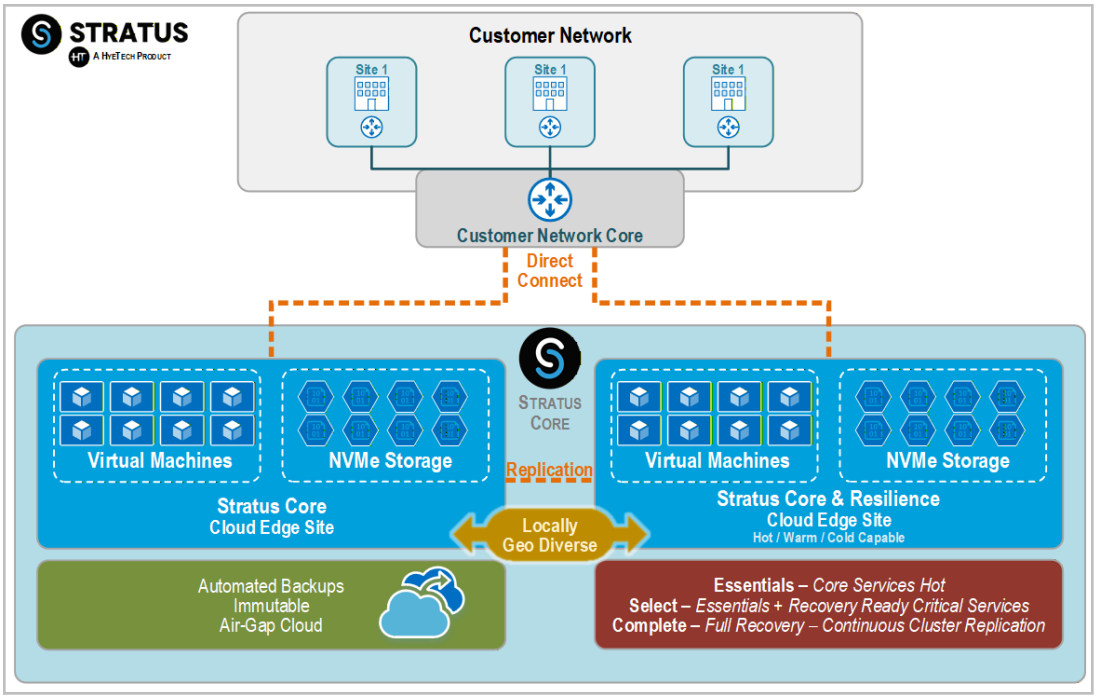
Core & Resilience
Hosted Compute & Disaster Recovery

Hye Tech Network & Security Solutions LLC

You manage only your VMs—HyeTech handles the rest

HyeTech Stratus delivers a fully managed, enterprise-grade compute and disaster recovery platform built for commercial and SLED organizations. Powered by Microsoft Azure and hosted in secure Tier 3 datacenters, Stratus eliminates the cost, complexity, and uncertainty of traditional on premises infrastructure—while enhancing resilience and security.

Stratus Core & Resilience vs On Premise Compute



Why Stratus Core & Resilience are the Better Choice

Organizations face rising hardware costs, aging systems, backup gaps, limited IT resources, and complex Disaster Recovery (DR) requirements. Stratus replaces all of that with a predictable, cloud ready platform that requires **no hypervisor licensing, no backup licensing, and no datacenter overhead.**

Core – Compute as a Service

Scalable compute resources, High performance NVMe storage, Hypervisor licensing included, built in **immutable backups** + air gapped cloud copy, full infrastructure management and monitoring.

Choose the right level of protection:

Resilience – DR as a Service

- **Essentials –** *Keep Critical Services Online*
  Always-on AD, DNS, and DHCP at our secondary site, shared infrastructure, lowest-cost entry point
- **Select –** *Backup-Based Recovery*
  Reserve recovery capacity for essential workloads, backup-based restoration with RPO measured in days, cost-effective, workload-based protection
- **Complete –** *Full Replication & Active Capacity*
  Continuous cluster-to-cluster replication, RPO in minutes, RTO in minutes/hours, Dedicated, mirrored environment for full continuity

Physical Facility

Local cloud with local geographic diversity, Tier 3 datacenter **facility uptime** through concurrent maintainability, redundant power, cooling, and network paths, 24/7 biometric physical security, SOC 2 Type II, ISO 27001, HIPAA, PCI DSS, CJIS compliant physical environments

Proven Financial Impact

Organizations moving from on-premises infrastructure to Stratus typically see:

- **30–45% reduction in total cost of ownership**
- No hardware refresh cycles or licensing renewals
- Lower power, cooling, and network requirements
- Budget predictability through a simple monthly service fee

The Stratus Difference

Predictable cost model, tiered DR built in, cloud-native capabilities without complexity, expert 24/7 monitoring and management, no single point of failure—maximum resilience

Accelerate Modernization with HyeTech Stratus

A simpler, more secure, more resilient future starts with eliminating traditional infrastructure complexity. Stratus enables IT teams to focus on delivering strategic value—not maintaining hardware.

Core & Resilience
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Hye Tech Network & Security Solutions LLC - Whitepaper

Simplifying Complexity | Modernizing Service Delivery | Accelerating Performance

Benefits of Compute & DR as a Service vs On Premises Servers

HyeTech Hosted Compute (Core) and DR (Resilience) represent a comprehensive cloud infrastructure solution specifically designed for both commercial and State, Local Government, and Education (SLED) organizations. Powered by Microsoft Azure and hosted in a local cloud environment, Core delivers enterprise-grade compute, storage, and backup while Resilience delivers various disaster recovery capabilities through a simplified, predictable service model that eliminates the complexity and cost burden of traditional on-premises infrastructure.

Modern IT Services Challenge

The Challenge: Infrastructure Complexity

Organizations in the public sector face unique challenges when managing IT infrastructure:

- **Capital expenditure cycles** that require 5-7 year planning horizons
- **Rising costs** for hardware, software licenses, and hypervisor platforms
- **Technical debt** accumulation as systems age between refresh cycles
- **Backup gaps** due to changing technology and lack of validation
- **Disaster recovery gaps** due to budget and complexity constraints
- **Limited IT resources** to maintain increasingly complex infrastructure
- **Compliance requirements** demanding robust security and availability standards
- **Stability** of on premises compute

Traditional infrastructure models force organizations to choose between feature-rich on-premises solutions with high costs and complexity, or limited cloud options that sacrifice capabilities.

The Solution: Stratus Core and Resilience Platforms

Core – Compute as a Service (CaaS)

Complete virtualization infrastructure delivered as a hosed & managed service:

- Compute resources scaled to your needs
- High-performance NVMe storage for demanding workloads
- Hypervisor licensing included – no separate VMware, Nutanix, or other platform costs
- Backups are a foundational element of the service; immutable backups, virtual machine backups, as well as air-gap cloud storage
- Full compute stack management – patching, updates, and monitoring of compute, hypervisor and storage handled by HyeTech; you just manage your virtual machine
- Cloud-native tooling – leverage Azure's ecosystem while maintaining operational simplicity

Resilience – Disaster Recovery as a Service (DRaaS)

Stratus Resilience Essentials

Core Infrastructure Continuity

Keep your foundational network services running no matter what. We host your critical infrastructure services (Active Directory, DNS, DHCP) in our secondary site on shared infrastructure, ensuring authentication and name resolution remain available even if your primary site goes offline.

- Shared infrastructure model
- Covers core directory and network services
- Always-on secondary presence
- Lowest cost entry point

Pricing Model: Per-VM Subscription

- Simple, predictable pricing based on the number of core infrastructure VMs hosted at the secondary site. Each VM carries a fixed monthly cost covering compute, storage, and management overhead on shared infrastructure.

Cost factors:

- Number of VMs hosted
- VM resource allocation (vCPU, RAM, storage)

Stratus Resilience Select

Backup-Based Disaster Recovery

Includes everything in Essentials.

Protect your most important workloads with recovery-ready capacity. Select the VMs that matter most to your business; we maintain reserved capacity at our secondary site to restore them from backup when disaster strikes. You choose the workloads, we guarantee the space.

- Workload-based capacity allocation
- Recovery from backup infrastructure
- RPO target: days under normal operating conditions
- RTO measured in hours/days
- Right-sized to your recovery requirements

Pricing Model: Composite Recovery Cost

Pricing reflects three components: the protected workloads, the managed backup service, and reserved recovery capacity.

Cost factors:

- **Protected VM cost:** Per-VM charge for each workload included in the DR scope
- **Managed Backup Service:** Commvault licensing and managed service fees for backup orchestration, monitoring, and recovery runbook management
- **Reserved Capacity Allocation:** Percentage of infrastructure cost based on the guaranteed compute and storage footprint reserved for your recovery workloads

Stratus Resilience Complete

Full Replication with Active Capacity

Includes everything in Essentials and Select.

True business continuity with continuous replication between clusters. Unlike backup-based recovery, changes are constantly replicated to your DR site, keeping your recovery point within minutes of production rather than hours or days. Your entire environment is mirrored to dedicated infrastructure with capacity guaranteed and ready at all times. Run active workloads at either site, failover in minutes, and maintain full operational flexibility.

- Cluster-to-cluster continuous replication
- Dedicated guaranteed capacity
- Active/active workload capability
- RPO target: 5-15 minutes under normal operating conditions
- RTO measured in minutes/hours
- Full environment protection

Pricing Model: Dedicated Mirrored Infrastructure

Pricing reflects the full cost of maintaining a like-for-like cluster at the DR site. The customer effectively funds dedicated infrastructure capable of running their entire environment at either location.

Cost factors:

- Equivalent cluster hardware and licensing
- Replication software and bandwidth
- Dedicated storage capacity
- Ongoing management and failover testing

Stratus Cloud Facility Advantage

HyeTech Stratus operates from Tier 3 certified datacenters, providing significant operational and security benefits that directly impact service reliability and data protection.

Operational Benefits

1. ***Uptime Guarantees***

Tier 3 facilities provide concurrent maintainability, allowing:

- Planned maintenance without downtime

- Equipment replacement while systems remain operational
- Zero-downtime infrastructure upgrades

Business Impact: Maintain availability during datacenter maintenance events that would cause outages in lower-tier facilities.

2. Multiple Independent Distribution Paths

Redundant power and cooling infrastructure ensures:

- N+1 fault tolerance for all critical systems
- Active/active power distribution
- Dual cooling systems with independent utilities

Business Impact: Single points of failure are eliminated, protecting against equipment malfunctions.

3. Concurrent Maintainability

The ability to service infrastructure without impact:

- UPS and generator maintenance during production hours
- Cooling system service without temperature fluctuations
- Network path maintenance without connectivity loss

Business Impact: Maintenance windows don't dictate your operational schedule.

4. Rapid Recovery Capabilities

Enhanced infrastructure supports faster recovery:

- Diverse fiber entry points for network resilience
- Multiple utility feeds reduce power-related delays
- Redundant cooling prevents thermal-related incidents

Business Impact: In disaster scenarios, geo-diverse Tier 3 facilities enable faster failover and recovery.

Security Benefits

1. Physical Security Layers

Tier 3 datacenters implement defense-in-depth physical security:

- Perimeter security – Fencing, barriers, and monitored access points
- Building access control – Mantrap entries, biometric authentication
- Cabinet-level security – Locked racks with individual access logs

- 24/7/365 security personnel – On-site guards and surveillance

Business Impact: Facility meets stringent compliance requirements for physical security (FISMA, CJIS, FERPA).

2. Environmental Monitoring and Control

Continuous monitoring protects against environmental threats:

- Temperature and humidity sensors with automated alerts
- Water detection systems at floor level and above ceiling
- Fire suppression systems (typically FM-200 or similar)
- Automated environmental adjustments

Business Impact: Data integrity is protected from environmental damage that could cause hardware failure or data loss.

3. Access Auditing and Accountability

Comprehensive logging creates security accountability:

- Electronic access logs with timestamp and identity
- Video surveillance with extended retention
- Visitor escort requirements and logging
- Separation of duties for critical systems

Business Impact: Detailed audit trails support compliance reporting and security investigations.

4. Compliance Certifications

Tier 3 facilities that house Stratus typically maintain rigorous certifications:

- SOC 2 Type II – Annual security audits
- ISO 27001 – Information security management
- PCI DSS – Payment card industry standards
- HIPAA – Healthcare data protection

Business Impact: Inherited compliance reduces audit burden for your organization.

5. Network Security Infrastructure

Enhanced network security at the facility level:

- Diverse fiber entry points prevent single point of compromise
- Dedicated cross-connects for private connectivity
- Network segmentation at the infrastructure layer

Business Impact: Multi-layer network security protects against external threats before traffic reaches your environment.

6. Business Continuity

Local geographic diversity between Tier 3 datacenters provides:

- Protection against regional disasters
- Compliance with data sovereignty requirements
- Reduced latency for geographically distributed users
- Enhanced disaster recovery capabilities

Business Impact: Your DR strategy benefits from proven infrastructure in multiple secure locations.

Cost Analysis and TCO Benefits

Traditional On-Premises Costs (5-Year TCO)

Capital Expenditures:

- Compute hardware purchase and refresh
- Storage array acquisition and expansion
- Hypervisor licensing (VMware, Nutanix, etc.)
- Backup software and licensing
- Disaster recovery infrastructure (hardware, software, facilities)

Operational Expenditures:

- Annual maintenance and support contracts
- Hypervisor licensing renewals
- Backup software subscriptions
- Power consumption and UPS maintenance
- Cooling system operation and service
- Datacenter space allocation
- Network infrastructure oversizing for future growth
- IT staff time for infrastructure management

Hidden Costs:

- Technical debt accumulation over 5-year cycles

- Emergency replacement expenses
- Opportunity cost of capital tied up in hardware
- Complexity tax on IT operations

HyeTech Stratus Cost Model

Predictable Monthly Service Fee:

- Compute and storage resources (actual usage)
- Clear costing and service description
- Immutable backups along with an air-gapped public cloud copy
- Complete infrastructure management
- Server backup and tiered DR for critical apps
- No surprise costs or refresh cycles
- True-forward billing model

Eliminated Costs:

- Hardware capital expenditures
- Hypervisor licensing fees
- Backup software costs
- Datacenter space, power, and cooling
- Hardware refresh planning and execution
- Support contract negotiations

Additional Savings:

- Reduced core network requirements (downsize to 1U or 2U switching)
- Lower power utilization and UPS sizing
- Decreased cooling requirements
- Freed datacenter space for other uses
- IT staff reallocation to value-added projects

Typical 5-Year Savings

Organizations typically realize 30-45% total cost of ownership reduction when moving from on-premises infrastructure to HyeTech Stratus, with the added benefits of:

- Added or enhanced disaster recovery capabilities
- Enhanced security posture through Tier 3 datacenter infrastructure
- Elimination of refresh cycle disruption

- Predictable operating expenses for better budget planning

Service Level Agreement and Support

Uptime Commitment

- 99.9% monthly uptime guarantee for compute services
- Inherited 99.982% facility availability from Tier 3 datacenters
- Scheduled maintenance windows with advance notice
- No downtime required for planned maintenance

Support Model

- 24/7/365 monitoring of all infrastructure components
- Proactive alerting before issues impact services
- Escalation paths for critical issues
- Regular business reviews and capacity planning sessions
- Dedicated technical account management for enterprise customers

Security and Compliance

- Inherited SOC 2 Type II audited annually from Tier 3 datacenters
- Compliance assistance for CJIS, FISMA, FERPA, and other public sector requirements
- Regular security updates and patching
- Vulnerability scanning and remediation
- Incident response procedures and reporting

Use Cases and Success Scenarios

School District Consolidation

Challenge: Multiple aging server rooms across district sites with limited IT staff and no disaster recovery.

Solution: Consolidated all compute to HyeTech Stratus with automated backups and DR for critical student information systems.

Results:

- 42% reduction in IT infrastructure costs
- Complete disaster recovery capability
- IT staff refocused on educational technology initiatives
- Eliminated 6 server rooms and associated costs

County Government Modernization

Challenge: End-of-life VMware infrastructure requiring $800K refresh with additional $200K in licensing costs.

Solution: Migrated to HyeTech Stratus with full environment replication for disaster recovery.

Results:

- Avoided $1M capital expenditure
- Achieved full DR compliance for first time
- Reduced monthly operational costs by 35%
- Eliminated hardware refresh planning burden

Regional University IT Transformation

Challenge: Complex multi-campus infrastructure with inconsistent disaster recovery and security posture.

Solution: Standardized on HyeTech Stratus across all campuses with centralized management and security.

Results:

- Unified security policy enforcement
- Consistent DR capabilities across all systems
- 28% reduction in total IT infrastructure spending
- Improved service delivery to faculty and students

Conclusion: The Path Forward

HyeTech Stratus represents a fundamental shift in how public sector organizations can approach IT infrastructure. By combining the power and flexibility of Azure with the operational simplicity of managed services, and hosting everything in secure Tier 3 datacenters, Stratus delivers:

Financial Benefits:

- Predictable operating expenses replace unpredictable capital cycles
- 30-45% total cost of ownership reduction
- Pay-as-you-grow model aligns costs with actual usage

Operational Benefits:

- Eliminate hardware refresh cycles and planning
- Focus IT resources on services and applications, not infrastructure
- Leverage cloud-native capabilities without complexity
- Benefit from enterprise-grade Tier 3 datacenter operations

Security Benefits:

- Enhanced physical security through Tier 3 facilities
- Comprehensive compliance framework
- Multi-layer security controls
- Regular auditing and certification maintenance

Risk Mitigation:

- Native disaster recovery capabilities
- Concurrent maintainability eliminates single points of failure
- Geo-diverse infrastructure protects against regional events
- Professional management reduces operational risk

Closing Summary

Comparison Table

Feature	On-Premises Infrastructure	Stratus Core & Resilience
Physical Facility Uptime Guarantee	No SLA guarantee, typically 95-98%, generally housed in a normal building *~175-438 hours downtime/year*	99.982% uptime SLA, housed in Tier 3 or higher data centers, concurrent maintainability *~1.6 hours downtime/year* ***110x less downtime***
Physical Power, Cooling & Environmentals	Generally - single utility feed, single UPS, generator (if available), building HVAC, single cooling unit, basic monitoring	Multiple utility feeds, N+1 UPS redundancy, Multiple generators, N+1 CRAC units, Hot/cold aisle containment, 24/7 environmental monitoring - ***Fully redundant with failover***
Physical Security	Generally - building access only, locked server room, no dedicated security staff, limited surveillance	Perimeter fencing & barriers, 24/7 security personnel, Biometric access control, Video surveillance - ***Multi-layer security***
Physical Disaster Recovery	Generally - same building/location, vulnerable to site disasters, manual failover required	Local region diversity, Protected from localized events, Automated failover options - ***True geographic separation***
Physical Compliance & Certifications	Customer responsibility, self-audit required, no inherited certifications	SOC 2 Type II audited, ISO 27001 certified, HIPAA, PCI DSS ready - ***Inherited compliance***
Physical Fire Suppression	Generally - building sprinkler system, water-based (equipment risk), basic smoke detection	Pre-action FM-200 system, gas-based (equipment safe), VESDA early detection - ***Equipment protection***
Staffing & Support	IT staff required 24/7, on-call rotation needed, limited escalation paths	24/7/365 on-site staff, professional operations team, expert escalation available - ***Included in service***
Scalability	Limited by room capacity, limited by hardware capacity, procurement delays, power/cooling constraints	Rapid scaling capability, instant resource allocation, no infrastructure limits, scales with customer demand - ***Unlimited growth***
Cost Structure	Rising cost of hardware & licensing, 5-7 year refresh cycles, unpredictable maintenance, hidden costs (power, cooling)	Predictable true-forward model, pay-as-you-grow pricing, all-inclusive service fee, no infrastructure costs - ***Budget certainty***
Cost Reduction	Unknown cost burdens, constant cost increases from multiple manufacturers	30-45% total cost of ownership reduction, Pay-as-you-grow model aligns costs with actual usage - ***Reduce Costs***
Deployment Time	3-6 months typical, hardware lead times, expansion times same as initial build	Days to weeks, fast provisioning, rapid expansion - ***Rapid deployment***
Business Continuity	Single point of failure, vulnerable to local disasters, extended recovery times, unprotected backups	No single point of failure, protected infrastructure, rapid recovery capability, Immutable backups included, air gapped cloud copy backup - ***Maximum resilience***
Maintenance & Patching	Manual updates, patching, and monitoring, Storage, compute, and virtualization, virtual machines and applications	Hosted & managed platform, Customer only maintains virtual machines and applications, IT resources manage applications or services - ***Focus IT Resources***

Technical Disaster Recovery	Requires separate DR planning & infrastructure, highly complex solutions that need maintenance and testing	Native disaster recovery capabilities, Tiered & optional levels of DR - ***Turnkey & tiered DR***
Operational Excellence	Technical debt accumulation, aging between refresh cycles, limited IT resources to maintain increasingly complex infrastructure	Professional management reduces operational risk, operational excellence with mature service delivery - ***Enhanced Service Delivery***
Cloud Readiness	On premises-based services, minimal or no cloud readiness	Leverage cloud-native capabilities without complexity, utilize cloud native tooling - ***Cloud Native Tooling***

Conclusion

HyeTech Stratus Core & Resilience offers a modern, reliable, and secure alternative to traditional on-premises infrastructure, eliminating complexity while delivering predictable performance and cost stability. By combining managed compute, built-in backup, and tiered disaster recovery capabilities within Tier 3 facilities, the platform enables organizations to reduce total cost of ownership, strengthen security and compliance, and improve operational continuity. With Stratus, IT teams can shift focus from maintaining infrastructure to delivering strategic value—accelerating modernization and ensuring resilient service delivery for the long term.