Safe & Secure Data Centers for a Hyperconnected World

Enhancing protection and reliability in digital infrastructure

12th Nov 2025

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About STPI

SOFTWARE TECHNOLOGY PARKS OF INDIA

Established in 1991, as an autonomous society under the Ministry of Electronics & Information Technology, Government of India, with the objective of encouraging, promoting and boosting the software exports from India.

SERVICES PROVIDED BY STPI

- Statutory Services - STP/EHTP Scheme
- Incubation Services
- High Speed Data Communication Services
- Startup Promotional Services
  - Centres of Entrepreneurship (CoEs)
  - Next Generation Incubation Scheme (NGIS)
- Project Management & Consultancy Services
- Data Centre Services
- Security Operations Centre Services
  - Vulnerable Assessment and Penetration Testing (VAPT)
- BPO Promotion Scheme
- EMC 2.0 Scheme

STPI's Data Centres-Enabling Secure, Scalable Digital Infrastructure

STPI's **state-of-the-art Rated-III Data Centers** provides secure, scalable, and high-availability digital infrastructure. These facilities are designed to support the digital transformation needs of **Government, PSUs, Institutions, Industries, and Startups alike.**

Key Highlights:

- **Nationwide Expansion:** Data Centres being set up across multiple STPI locations to ensure regional accessibility and redundancy.
- **Rated-III Infrastructure:** Built to international standards ensuring **99.982% uptime**, robust power backup, and high network resilience.
- **Multi-Sector Support:** Serving as the backbone for **e-Governance, cloud services, innovation ecosystems, and enterprise operations**.
- **Operational Excellence:** STPI currently operates **five Data Centres**, demonstrating its capability to manage critical digital infrastructure efficiently.
- **Empowering Digital India:** Enabling secure data storage, cloud hosting, and digital service delivery to accelerate the nation's digital economy.

Ananta Cloud

"**Ananta** is a Sovereign and Trusted Cloud Platform designed to empower organizations in overcoming current & future business challenges. It drives enhanced performance and sustainable competitive advantage by offering the freedom to build, manage, and deploy applications on demand. Ananta also fosters innovation and supports entrepreneurship through a robust environment for incubation and growth"

Sovereign Cloud

Operated by a Sovereign entity

Jurisdictional Control of Data

Foreign Entities cannot assert authority over Data

All data resides in the jurisdiction

Operations & management carried out by Sovereign citizens

Cloud Service Portfolio

Compute (IaaS & PaaS)

- Virtual Machines
- Desktop as a Service
- Container as a Service

Storage (IaaS)

- Block Storage
- File Storage
- Object Storage
- Archival Storage

Database (PaaS)

- Managed DbaaS
  - Web
  - Standard
  - Enterprise Edition

Security (IaaS & PaaS)

- Active Directory, IDAM, TLS/SSL
- HSM, DDOS Protection
- Multi-Factor Authentication

Network (IaaS)

- Virtual Network (VNet / VPC)
- Public IP Allocation
- VPN Gateways
- NW Load Balancer (L4)

Network (IaaS) contd..

- Application Load Balancer(L7)
- NGFW (Firewall),
- Web Application Firewall (WAF)

Monitoring (PaaS)

- Log Analysis as a Service
- Operational Metrics
- Alerts via Email/SMS/API

Managed Services

- PRIME: 24x7,
  30 min incident SLA
- PRIORITY: 24x7
  15 min incident SLA

Cloud Service Portfolio

Foundational

CORE IaaS & PaaS

Compute as Service : Virtual Machine, Container as a Service, Serverless

Managed Database as Service (SQL Server, NoSQL)

Storage, Backup and Disaster Recovery as a Service

Network as Service: Virtual Network and Load balancer as a Service ,VPN gateway & CDN

Security as Service : Firewall, Web Application Firewall, DDOS, IAM, Threat protection,

Cloud Management and professional Services

Advanced

Optimized

DevOps as a Service

- Low Code Application Development
- Workflow & Integration as a Service
- API Management as a Service PaaS

Application Platform (App Platform) as a Service PaaS

Big Data Analysis as a Service & Data Warehouse as a Service

Data Integration Platform as a Service

Cognitive Services (Computer vision, Language Translation API, Search, ML)

IoT Platform as Service

Business Intelligence & Data Visualization as a service

Video and Data Streaming Service

Massive Data Processing Services

Specialized

Next Gen Services

Email, calendar and contacts

Collaboration

Project management

Personal document storage as service

Citizen/Customer relationship case management

Customer Insights

Field Service

Remote Assist

Sales & Marketing

Hybrid & Multi Cloud

Configurable

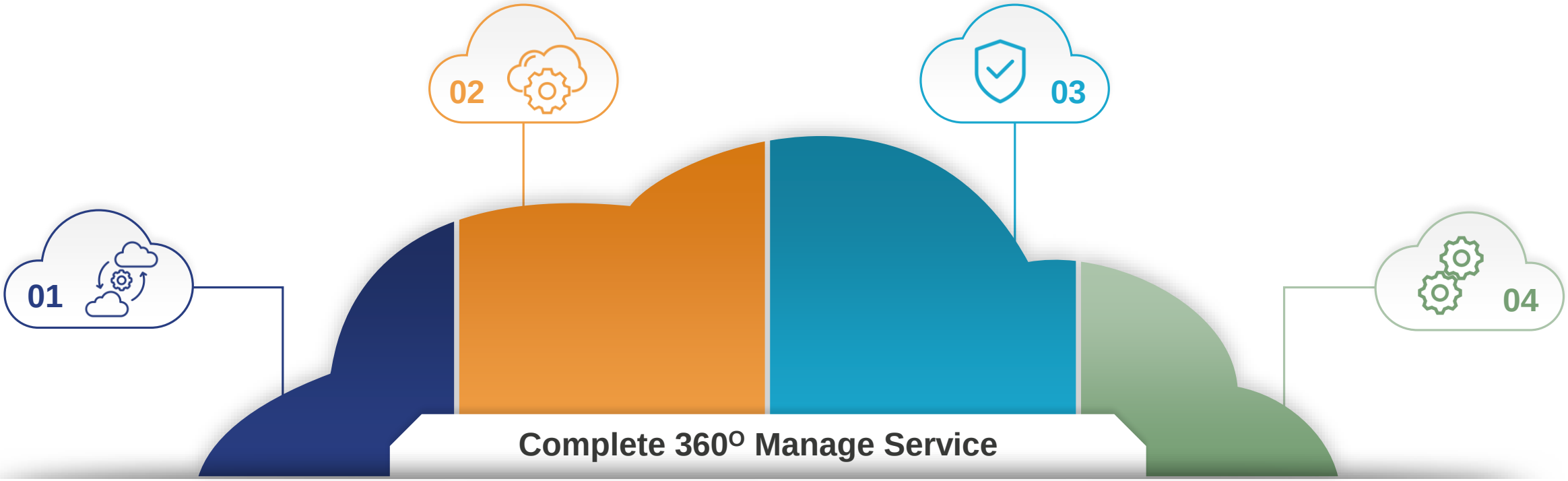
Monitoring and Chargeback

Extensible

Scalable and Agile

Click to Deploy & Deliver

Complete, Comprehensive Cloud Service



Cloud Adoption and Migration	Cloud Optimisation	Cloud Security	Cloud Operations and Management
Ensure a simple as well as right cloud strategy to adopt and manage your migration to deliver a secure and smooth experience	Cloud is not ‘set and forget’. Continuous optimisation can ensure cost control, reduced risk and accelerate innovation.	Strengthen your cyber security defenses with a practical, data-driven approach to reducing cloud vulnerabilities.	Gain the confidence to run your cloud infrastructure, which is fully secure, optimized and compliant.

Ananta NOC and SOC

IT Management Services

Technology Inputs

- Collect all data points
- Metrics, Logs & traces, etc.
- Intelligent incidents & event correlation
- Asset discovery and Details
- End-to-end observability on Premise, hosted & cloud
- Key thresholds & indicators

Centralized operational control centre in which real-time and predictive analytics are aggregated from various data sources and used as part of a coordinated approach to manage, and provide enterprise visibility and improvements

Outcomes

- Better analytics and Visibility
- Fast identification & resolution
- Improved customer experience
- Efficient & Low Downtime
- Optimisation of cost

IT Service Management

IT Operations Management

Enterprise Service Management

IT Business Management

Platform

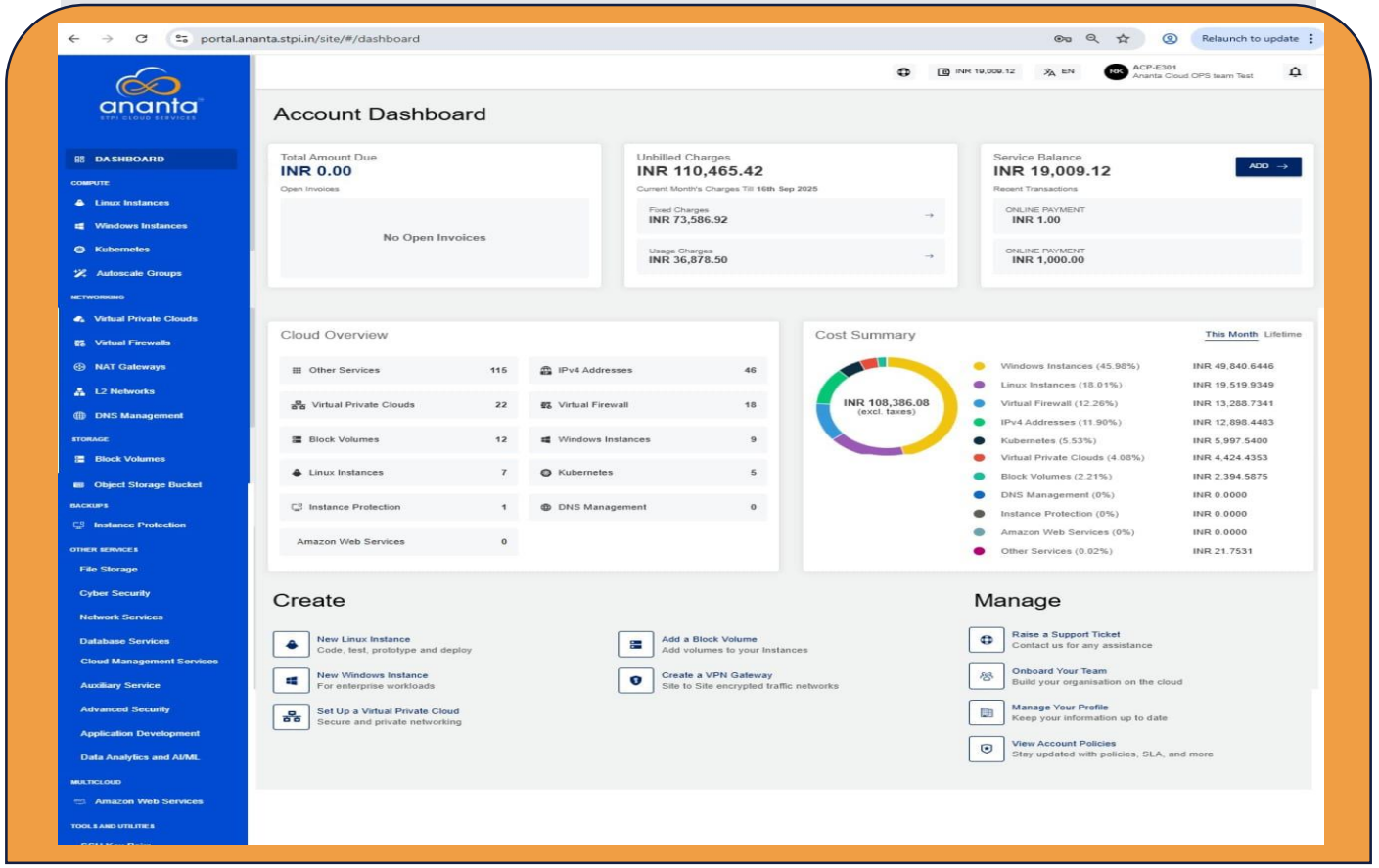
Ananta Marketplace

What is it?

“Ananta Marketplace” helps connect users with its partners, independent software vendors, and startups that are offering their solutions and services, which are optimized to run on Ananta marketplace customers can find, try, purchase, and provision applications and services from hundreds of leading service providers. All solutions and services are certified to run on Ananta.

Customer Self-Service Portal

One-Stop Shop for Ananta customers to manage user account, services, billing and support.



- Account Management
- Service Provisioning
- Billing and Payment Management
- Service Monitoring and Alerts
- Support & Trouble Ticketing

Hyperconnected Challenges

Hyperconnected Challenges

Expanded Digital Footprint Risks

AI, IoT, and cloud integration increase attack surfaces and complicate data center security challenges.

Regulatory Compliance Challenges

Data centers must comply with DPDP, and other laws enforcing strict data protection and penalties.

AI-Powered Cyber Threats

Emerging threats like deepfakes and automated phishing require adaptive, intelligent security solutions.

Holistic Security Strategies

Combining physical, cyber, and operational defenses with zero trust and AI-driven threat detection enhances resilience.

Security Strategies and Best Practices

Strategic Pillars for Security

Zero Trust Architecture

Zero Trust Architecture ensures no user or device is trusted by default, enforcing strict access controls.

AI-Driven Threat Detection

AI analyzes vast data in real time to detect anomalies and predict potential cyber threats effectively.

Quantum-Resistant Encryption

Quantum-resistant encryption safeguards data against future quantum computing threats, ensuring long-term security.

Identity Resilience and Training

Continuous identity monitoring and tailored training programs protect identity systems and strengthen security culture.

Best Practices for Secure Data Centers

Physical Security Measures

Multi-layered physical security like biometric access, CCTV, and mantraps prevent unauthorized facility entry.

Identity and Access Management

Strong IAM with multi-factor authentication and role-based access ensures only authorized access to sensitive systems.

Data Encryption Practices

Encrypting data at rest and in transit protects against interception and unauthorized access.

Security Audits and AI Monitoring

Regular audits ensure compliance, while AI-powered analytics improve threat detection and response.

Future Trends and Innovations

Emerging Trends in Data Center Security

Hybrid Cloud Security

Hybrid cloud frameworks offer unified security across on-premises and cloud environments, enhancing overall protection.

Chip-Level Security Features

Hardware-embedded chip-level security provides tamper-proof safeguards and ensures device integrity within data centers.

AI-Enabled Perimeter Protection

Smart perimeter protection uses AI-enabled fencing and intelligent surveillance to boost physical security around data centers.

Sustainability and Compliance

Energy-efficient firewalls, adaptive cooling, and compliance with global standards drive greener, compliant data centers.

Technology Innovations

AI-Powered Security Solutions

AI-driven firewalls and GPU cluster protection improve data center security with hyperscale throughput and real-time defense.

Behavioral Analytics Monitoring

Continuous monitoring of user activity identifies irregular login times and data transfers to flag anomalies.

Data Centre trends

India’s data center capacity is projected to reach 2,000 MW by 2027, driven by a strong emphasis on localization and infrastructure development. New Cooling technologies (liquid, immersion etc.) will play a vital role in creating energy efficient Data Centres.

Strategic Technology and Policy Impact

Integration of innovative solutions and regulatory frameworks enhances resilience and security in digital infrastructures.

Resilience and Strategic Planning

Building Resilience and Sustainability

Fault-Tolerant Systems

Redundant power supplies and disaster recovery protocols ensure continuous operation during emergencies.

Identity Resilience

Real-time monitoring and rollback capabilities protect against identity-based attacks and support continuity.

Automated Recovery Orchestration

Automation enables rapid restoration of directories, policies, and trust relationships after disruptions.

Sustainable Energy Integration

Using renewable energy and adaptive cooling reduces environmental impact and increases data center efficiency.

Future Roadmap and Conclusion

Short-term Security Measures

Implement zero trust architectures and enhance identity and access management to quickly strengthen security.

Mid-term Strategic Deployment

Adopt AI-driven monitoring and hybrid cloud security for unified control across data centers.

Long-term Innovation Focus

Focus on quantum-safe encryption, sovereign cloud strategies, and advanced physical security measures.

Leadership and Culture

Leadership commitment and security awareness culture ensure shared responsibility and successful implementation.

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STPI

THANK YOU