OBSERVATIONS FROM GARTNER

IT OPERATIONS STRATEGIES & SOLUTIONS SUMMIT

MAY 15-17, 2018

GLOBAL TECHNOLOGY SOLUTIONS GROUP

As Gartner clients and students of the industry, GTSG attended the Summit in Orlando May 15-17. Following are eight themes we picked up on at the event.

1

From the Data Center to "Distributed Digital Infrastructure."

Dave Cappuccio makes the bold assumption that 90% of enterprises will shut down data centers over the next decade in favor of what he calls "distributed digital infrastructure." He advises continuing to improve physical infrastructure efficiency, while enhancing infrastructure reach (computing as a service, multiple computing locations) and leveraging partner services (both cloud and colocation). Of workloads that will remain on-prem, clients report online transactions, high-performance compute, and data warehouse as the most prevalent.

Dave's "Monday Morning advice" is to:

1. begin a formal workload placement project to create a baseline for change, and
2. refocus on optimization of critical on-premises infrastructures.

NOTE: As we completed this summary, GTSG has just signed another engagement with exactly this scope; setting the long-term workload strategy while ensuring that the current infrastructure supports the transition period.

2

Journey to the Mix: presented by Tom Bittman. We are on our way not simply to the cloud, but to a mix of expanding requirements, topologies, and operational models, with what Bittman calls a "left turn" to the edge. The accelerating explosion of connected things and more immersive human/machine interfaces will push data and compute to the edge, with latency a huge concern.

While latency has always been a concern for online search, less than one millisecond of latency can cause some serious consequences in the world of Industrial IoT. A non-Gartner source expands:

In a high speed continuous production system with sensors monitoring every aspect of the operation, every second matters. Anomalies must be detected, and corrective actions applied in near real time. Any delay in detection, assessment, decision-making, and execution would be costly, in terms of worker safety, product quality, costs and lost revenues.[1]

Bittman concludes that half of large enterprises will be integrating edge computing principles into 2020 projects, whether they know it or not. Indeed, off-premises and cloud soon become larger than on-premises in terms of compute power.

3

Cloud spend is expected to grow to $232B worldwide, but not as a cost savings measure. Infrastructure-as-a-Service (IaaS) is forecasted to grow at a compounded rate of 32% through 2020; 15% to 20% of all VMs run in the public cloud today.

The top three reasons cited by those in the briefing room were (1) innovation, (2) agility, and (3) application development. Cost savings was fourth, followed by standardization and executive mandate.

Gartner recommends the positioning of a "Cloud Architect" in the organization. This individual is "responsible for designing higher-level processes and policies to enable greater automation through policy/rule encoding" — finding ways to automate the interrelationships among cloud providers inside the hybrid environment that will likely persist for years.

4

On the contrary, the absence of careful controls will lead to a degraded cost position. Gartner assumes that within three years, "75% of organizations that do not proactively manage their cloud implementation will spend at least 25% more than on-premises deployments."

Gartner has simplified its cloud management functionality structure to seven elements:

- Provisioning and Orchestration
- Service Request
- Inventory and Classification
- Monitoring and Analytics
- Cost Management and Resource Optimization
- Cloud Migration, Backup and DR and
- Identity, Security and Compliance

The vendor landscape is broad and growing, with no fewer than 19 providers mentioned among these seven categories, including the "Big Three" cloud providers themselves (AWS, Azure and GCP).

5

Cloud management systems are essential. Gartner notes that a lack of visibility can imperil cloud initiatives. One analyst said to us "when it goes down, they ain't calling [insert IaaS provider here]". I&O remains responsible for the availability and performance of cloud-hosted applications, even if beyond their control. New strategies are needed to deal with new patterns of traffic and loss of visibility, and most traditional monitoring tools are unable to provide holistic monitoring in a cloud, or hybrid IT, environment.

Specific to cost control, Gartner teaches a five step process- plan/ track/ reduce/ optimize/ mature. A cloud budget, visibility, action to reduce spend, and the use of analytics are required: Gartner predicts that, by 2020, organizations that lack cost optimization processes will average 40% overspend in public cloud.

6

The distributed digital infrastructure requires rethinking the network. The IT, edge to cloud marriage is still evolving. The enterprise must address simultaneously centralized and distributed concerns, peer-to-peer networking and security concerns, and refocus on specific issues of data location and flow.

There has been a network innovation gap: (1) flat budgets in spite of increased complexity with a business that expects more, (2) demand for fast innovation with DevOps agility needed, yet the command line interface is still king. In response, Gartner believes, by 2020, more than 1,000 large enterprises will use intent-based networking systems in production, up from less than 50 today.

7

Digital Business Creates an Automation Imperative. IT is forced to scale, moving from tens to hundreds-of-thousands of items to configure and manage. Business growth will require unparalleled IT capacity, quality and reliability.

To scale, IT must automate. This imperative addresses the shortage of people and skills. Gartner advises to start with Task Automation; address repetitive, lower value, limited human touch required activities first before moving to the more complex automation of IT and Business Services. Build on existing skills and tool "beachheads", prioritizing based on time to value.

8

The Internet of Things will become a bigger input to the I&O agenda, with 40% of I&O teams assuming some responsibility over their organizations' IoT initiatives, up from 5% today.

Client discussions have moved from 'what is it?' to 'how will it impact us?' Specific concerns include LAN/WAN sizing for new data requirements, server sizing for data and analytics requirements of IoT data, secure storage operating at scale with, of course, security as the elephant in the room.

Gartner offers a continuum of roles for I&O to play in this change:

- progressing from bystander to implementer to operator to driver AND
- recommends a holistic approach with a multi-disciplinary team or even a Center of Excellence built from early adopters.

REFERENCE

1 | https://www.iotforall.com/iot-vs-industrial-iot-differences-that-matter/, retrieved 06.09.18.

Thank you for your interest in our observations.

For 30 years, GTSG has worked exclusively on infrastructure transformation and optimization.

Please reach out if we can help you in any way.

Thank you.

GLOBAL TECHNOLOGY SOLUTIONS GROUP

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DATA CENTER STRATEGY AND MIGRATION

Strategic Approach

- Business case development
- Transition planning
- Technical modeling
- Non-disruptive execution

Application Analysis Methodology and Tools

- Decomposition
- Affinities
- Wave planning

Project Leadership

Implementation Subject Matter Expertise

INFRASTRUCTURE SUPPORT SERVICES

Managed Services

- Multi-platform including DB & MW
- Service-level based or FTE-based
- Architecture, administration, programming, systems managment
- Remote or Onsite

Project Based Services

- Platform upgrades
- Workload migrations
- Implementation services
- Consulting and Assessment (performance, DR, HA....)
- Project Management

INFRASTRUCTURE TRANSFORMATION

Transition Services

- Insourcing/Outsourcing
- Knowledge transfer and interim support
- Application migration
- Service management design

Disaster Recovery Design and Implementation

High Availability Design and Implementation

Application Assessment and Deployment

- Reference Architecture
- Infrastructure Alternatives/ Recommendations
- Implementation/Migration

INFRASTRUCTURE OPTIMIZATION

Architecture Assessment and Design

Server Virtualization/Consolidation

Storage Optimization

Data life-cycle management

- Tiering
- Standardization/Automation

Application Decomposition Application

Re-design/Remediation Performance

Management and Tuning Latency

Analysis and Consulting