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JOURNEY TO A BOUNDARYLESS ENTERPRISE

ACCELERATING BUSINESSES WITH THE BOUNDARYLESS DATACENTER

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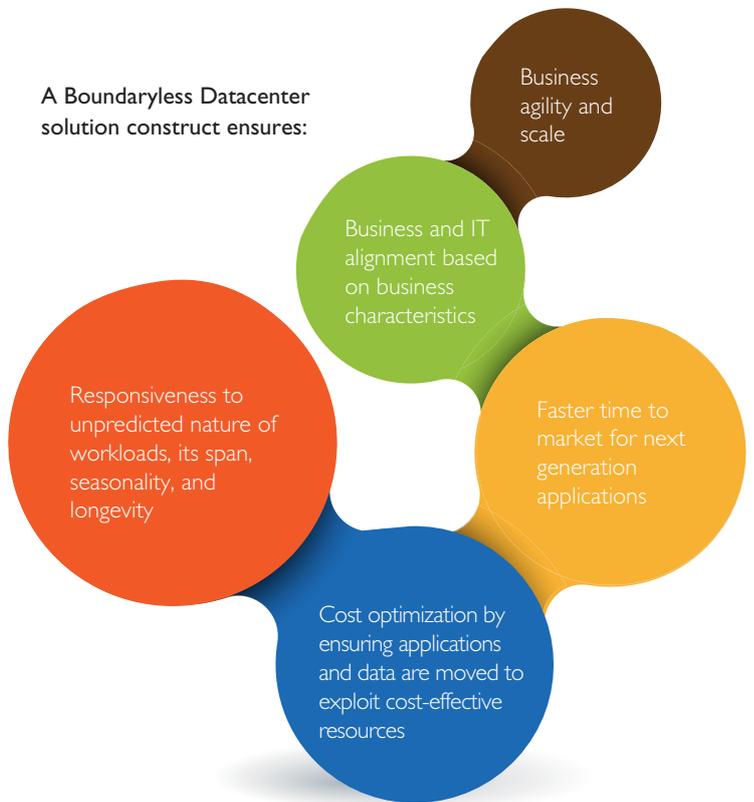
The boundaryless world is here

Some of the leading technology trends of 2015 are without boundaries. These include Cloud services and web scale IT, the Internet of Things, 3D printing, advanced analytics, context-rich systems, and smart machines. As the boundaries of technology come crashing down, enterprises are now dwelling on driving new business possibilities and digital outcomes by leveraging these emerging technologies. Early movers are reimagining their business model by breaking the traditional boundaries of technology leverage and IT service models.

There is a larger picture that makes the boundaryless world obvious. Customers of products and users of services are all over the world; plants and stores are in various geographies; suppliers are spread across continents; and collaborators and researchers are not necessarily under a single roof. How then, can your datacenter(s) – which is the hub of business service delivery– continue to operate in a traditional model? Shouldn't Datacenters extend into external clouds and IT services supply chain and becomes a hub for Boundaryless service delivery? We believe that the Boundaryless Datacenter is increasingly becoming indispensable to a business to drive agility and provide foundation to their digital journeys.

The development of the automobile industry illustrates the point well. In the 1960s, the industry was concentrated in the US. This included ancillary organizations and equipment suppliers. As demands on the industry were placed to reduce costs, sourcing extended to low cost geos in far flung places like Japan and then Korea. In several instances, some part of the manufacturing activity itself moved outside the US, with only the marketing and sales function left to be fully managed locally. Operations and workloads became Boundaryless, leaving auto manufacturers to manage their boundaryless supply chains. How manufacturers stitched the boundaryless components of their business determined their value differentiator.

A Boundaryless Datacenter solution construct ensures:

Business agility and scale

Business and IT alignment based on business characteristics

Responsiveness to unpredicted nature of workloads, its span, seasonality, and longevity

Faster time to market for next generation applications

Cost optimization by ensuring applications and data are moved to exploit cost-effective resources

The Boundaryless Datacenter is a new IT service paradigm. Its chief goal is to ensure organizations achieve the desired business outcomes and provide convenience of operating IT to its users.

Boundaryless datacenter is not purely about technology. It is about making IT friendly for the community of end users. These users include developers, business units, consumers and partners. In other words, a Boundaryless datacenter puts business services at the center.

The challenge is to transform current datacenter thinking to one that is software defined with embedded intelligence and the ability to auto correct (see Figure 1). A software defined approach in the Boundaryless datacenter solution also accelerates the lifecycle of business services though policy driven automation.

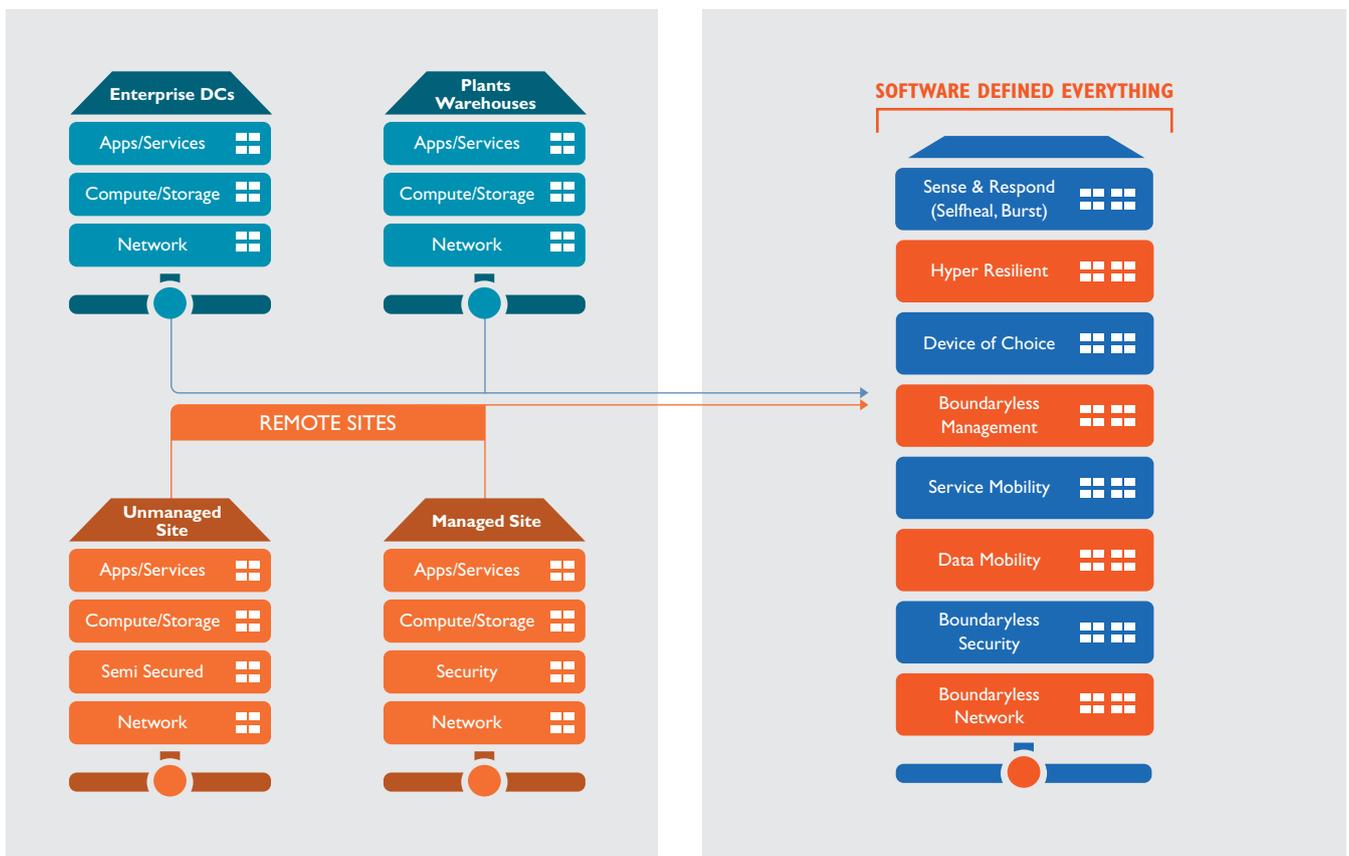## A TRANSITION FROM CURRENT TO BOUNDARYLESS DATACENTER

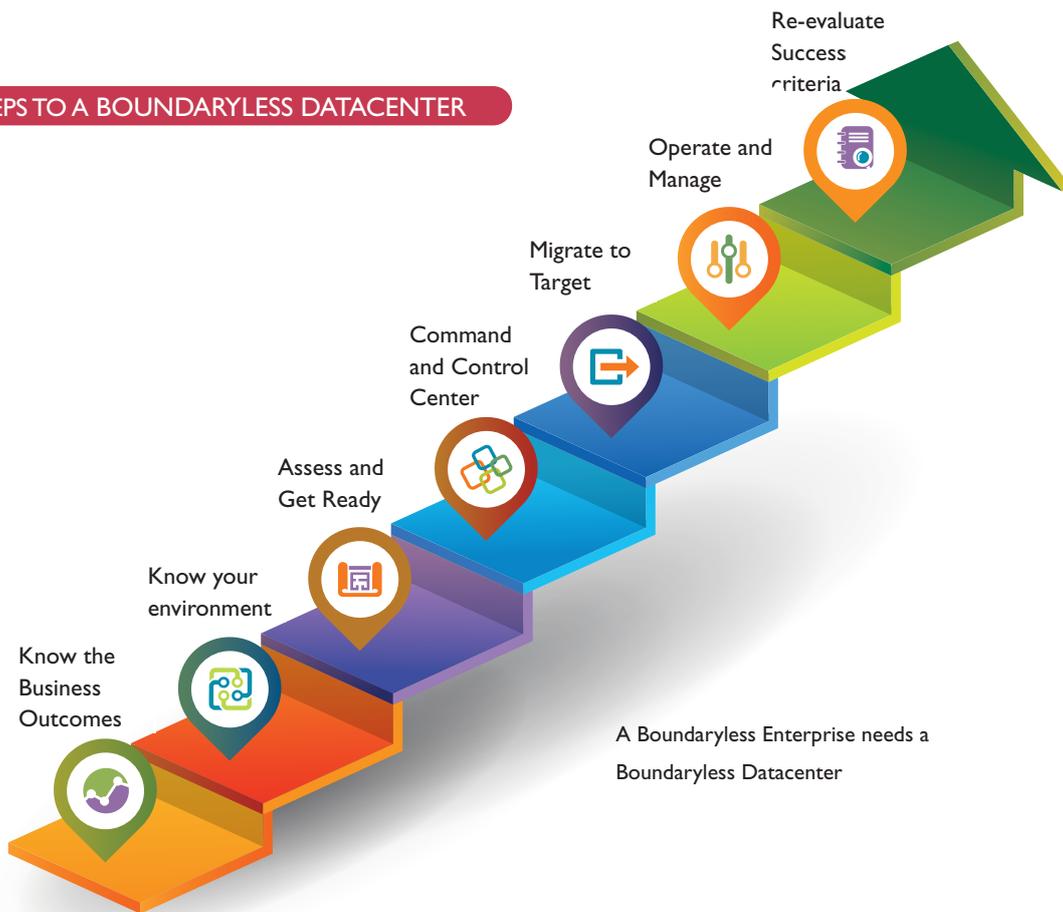Figure 1: The Software-defined Boundaryless Datacenter framework

The critical questions to ask are, "Can my current datacenter cater to evolving business needs? Does it have the ability to meet the needs of a data-centric and analytics driven organization? Can it adapt to the explosion in social media and satisfy users with a bewildering number of devices? Can management and workloads be moved around effortlessly, based on business needs? Can it be accessed from anywhere? Can it demonstrate hyper resilience in an Always-On world? And yet ensure that existing security policies are relentlessly applied regardless of where

the data and applications reside - on premise, in public or private clouds or in a hybrid environment?"

Seven Steps to a Boundaryless Datacenter

A successful migration from a traditional datacenter(s) service hub to a boundaryless service hub needs a clear roadmap. Below is a seven-step recommendation to get to the Boundaryless datacenter service hub state:

7 STEPS TO A BOUNDARYLESS DATACENTER

Re-evaluate Success criteria

Operate and Manage

Migrate to Target

Command and Control Center

Assess and Get Ready

Know your environment

Know the Business Outcomes

A Boundaryless Enterprise needs a Boundaryless Datacenter

1. Know the business outcomes to be achieved: Do you want to leverage technologies to reduce costs? Are you digitizing your business and therefore need robust and scalable infrastructure? Are you trying to create flexible capacity so a business requirement can be serviced when required (such as Ecommerce)? Are you trying to create business resiliency? Do you want to exploit capacity in various markets without ballooning Capex? Do you want to leverage new-gen infra for next gen workloads such as big data and mobility? It is necessary to first define the business and IT outcomes to be achieved and the measurable metrics and success criteria for each outcome. Roles such are Business Value Realization Manager and Innovation Manager are now replacing the traditional Quality Assurance (QA) and Program Management Office (PMO) roles to define and drive these outcomes.

2. Know your environment: The Boundaryless datacenter solution begins with an assessment of your current datacenter assets and systems and the gaps that exist. This includes building an inventory list of assets (infrastructure and applications) and charting their inter-dependencies on processes, systems and contracts and understanding the workload attributes. The exercise results in an understanding of workload criticalities and their relationship with the business attributes, workload

characteristics including capacity, usage and performance, and dependencies on the third party bolt-on components and the resiliency gaps. You are then able to gain insights into modernization opportunities, refresh requirements around ageing assets and finalize the infrastructure investments. This sets the foundation for the transformation.

3. Assess and get ready for a boundaryless world: It is important to take a workload centric approach while embarking on the Boundaryless datacenter journey. Forecast and assess supply and demand for the workload for today and future, business parameters including regulatory and compliance requirements, data criticality, and integration with the core business processes. Equally important is the architectural fitment aspects such as scalability and the security requirements for that workload. Based on the responses, prepare a hybrid workload placement blueprint that extends services within and beyond the traditional Datacenters into external cloud followed by the ROI analysis. This also creates the right approach to legacy modernization, on premise private cloud and public cloud adoption. This is also a significant step towards future-proofing your Datacenter services hub.

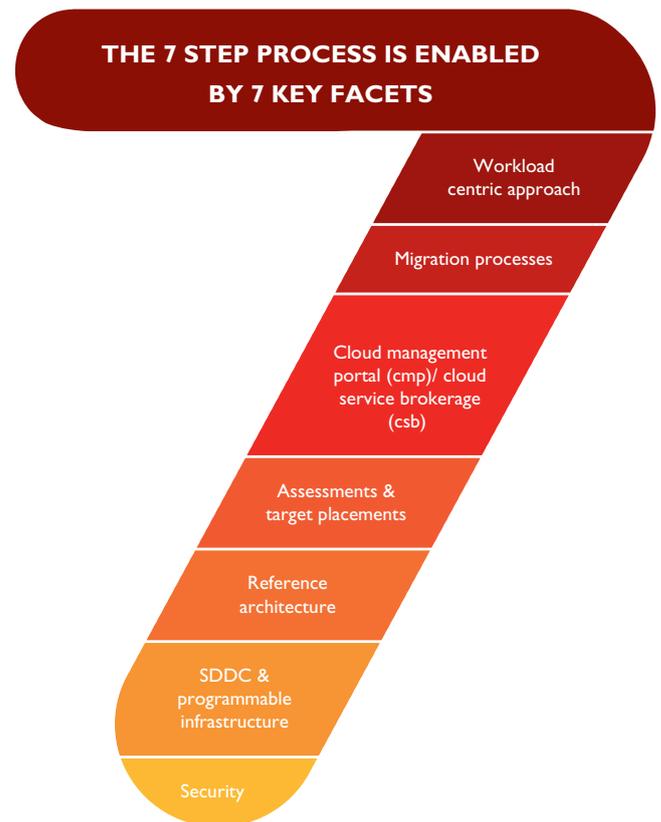**4. Create Central Command and Control:** The management and

monitoring of a Boundaryless datacenter calls for a central command and control setup. This puts in place a holistic method to provisioning a catalog of services that users need and create chargeback mechanisms by business units. It also creates identity and access control for the end users for the services they would avail in addition to providing reports and analytics for the services they consume. What the organization acquires through central command and control is the equivalent of a powerful central nervous system that powers and guides future applications workloads, compute and storage environments. This component is dependent on automation and on an industrialized approach to save time and provision an agile Cloud infrastructure. The IT organization in this phase would create a technology foundation for the hybrid cloud architecture and a migration/deployment approach for each workload type. While this would help meet cost and operational requirements, it must be borne in mind that it also has a significant impact on security which will need to be hardened in the hybrid architecture.

5. Migrate to target: Using migration tools, workloads are re-allocated and applications are redistributed as required to reach the target state. It is important to focus on automation and standardization around workloads along with providing access to dashboards and customized reporting of infrastructure health, operational processes, usage, hot spots and the early identification of emerging gaps. The key during this step is safe and secure migration without disruption, especially in light of the fact that there could be other IT initiatives that may impact the migration. A recommended solution to reduce the risk of blackouts is to use certified reference architectures and proven migration processes to fast track the approach.

6. Operate and manage: Once the Boundaryless datacenter is up and running, a business will want to ensure that it is driven by continuous innovation and guidance. Businesses may gain these levers by opting for the Boundaryless datacenter as a managed service. This maintains the Boundaryless datacenter and provides operational insights and critical inputs for capacity planning, efficiencies and risk management. A hybrid boundaryless world drives agility but the best results are achieved when IT operational processes, monitoring and service management are also tweaked to the fit into the Boundaryless datacenter operating model. The operational philosophy of the organization must extend from traditional IT KPIs to business SLAs based that are defined based on the outcomes desired.

7. Re-evaluate success criteria: Business continues to undergo continuous change – models and processes that were valid today may need to change tomorrow. This means keeping an eye on the changes and ensuring that the Boundaryless datacenter keeps pace. What are the

new success criteria and metrics that the business demands? Is your Boundaryless datacenter able to deliver against those? These are the two questions that must be asked to constantly re-evaluate your Boundaryless datacenter strategy.

THE 7 STEP PROCESS IS ENABLED BY 7 KEY FACETS

Workload centric approach

Migration processes

Cloud management portal (cmp)/ cloud service brokerage (csb)

Assessments & target placements

Reference architecture

SDDC & programmable infrastructure

Security

Keeping the Organization Boundaryless

The Boundaryless datacenter has the best chance of success when it is based on reference architectures and cloud blueprints that are tried and tested. This can be enabled by working with OEMs and eco-system partners who validate the Boundaryless datacenter architecture. Using process assets and tools, these can then be turned into replicable workload centric, software-defined, and hyper resilient solutions in an industrialized migration factory. For customers this means agility and flexibility in a boundaryless world.

About the Author

Milind Halapeth, General Manager and Global Head of Datacenter Practice at Wipro Technologies.

Milind has led the Datacenter practice of Wipro for the past 3 years, and has played a key role in developing next generation transformative offerings and rapidly growing the practice across global geographies. In the past, he was heading the presales for Global Infrastructure services, responsible for presales and solutions globally. He has led large enterprise transformation programs from concept through implementation. His current focus areas include industrializing Hybrid Clouds and Devops.

Milind joined Wipro in 2007, and has more than 20 years of experience in IT Industry. Prior to joining Wipro, Milind was responsible for Business Process and Legacy Application Transformation, and ERP Rollouts in consulting organizations. Milind holds Bachelor of Engineering in Computer Science and MBA.

He is an active participant and speaker at industry forums and has represented Wipro in leading industry conferences and events on Datacenter strategy and Emerging Technologies.
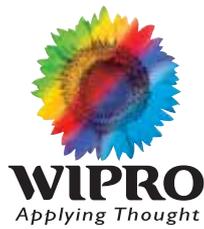
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