

kyndryl™

# Kyndryl Power Move to Azure with Skytap

Enterprises have been increasing their cloud environments, but **Power has mainly been on-premise** until recently with efforts to **increase business efficiency & efficacy** due to **costs, regulations, and business modernization**



## Cloud = IT

“ Cloud is no longer just ‘someone else’s computers.’ It’s not a place to get cheaper server and storage capacity. It’s not even a place. It’s now **shorthand for the broad collection of tools, services, patterns, and practices** you’ll use to transform how you build, deploy, and manage software.

Source: Forrester Cloud Powers The Adaptive Enterprise, Jan 2022

## 2030

Year by which the **Climate Neutral Data Centre Pact** aims for data centers in Europe to be climate-neutral as tech is increasingly becoming a primary CO2 emitter<sup>1</sup>

“Viewing 30 minutes of Netflix emits the same amount of CO2 as driving nearly 4 miles”<sup>3</sup>

<sup>1</sup>[Energy Statistics and Data](#)

<sup>3</sup>[The Shift Project Report](#)

## 23%

Of Enterprises state:

*“Restructuring their IT financial footprint and shift from **capex** to **opex** model”*

Is the main technology driver for utilizing cloud managed services.

Source: 2021 Managed CloudView, July 2021

Survey Question: . Which two of the following do you believe are the primary BUSINESS/Technology drivers in utilizing managed cloud services? (n=1,500)

# Today's Challenges



## Cost

- High CapEx for on-prem data centers, having to renew them every 5 years
- High energy & maintenance cost
- Downtime and Data Recovery could be financially detrimental: \$300K/hr - \$5 Million/hr<sup>3</sup>



## Regulations

- Several programs, initiatives, and regulations are forcing/compelling businesses to rethink where their power lives and operates: *American Recovery and Reinvestment Act, National Data Center Energy Efficiency Information Program, Federal Energy Management Program (FEMP), Climate Neutral Data Centre Pact, Energy Act of 2020*, etc.



## Modernization

- As majority of business environments are moving/living in the cloud, there is little improvements made for on-prem power for efficiency, app integration and data insights, and new capabilities & business alignments



## Security

- 70% of businesses rate their OT/ICS security as high or severe risk, up from 51% in 2019<sup>1</sup>
- 48% of businesses didn't even know they suffered a cybersecurity incident<sup>1</sup>



## Scalability & Elasticity

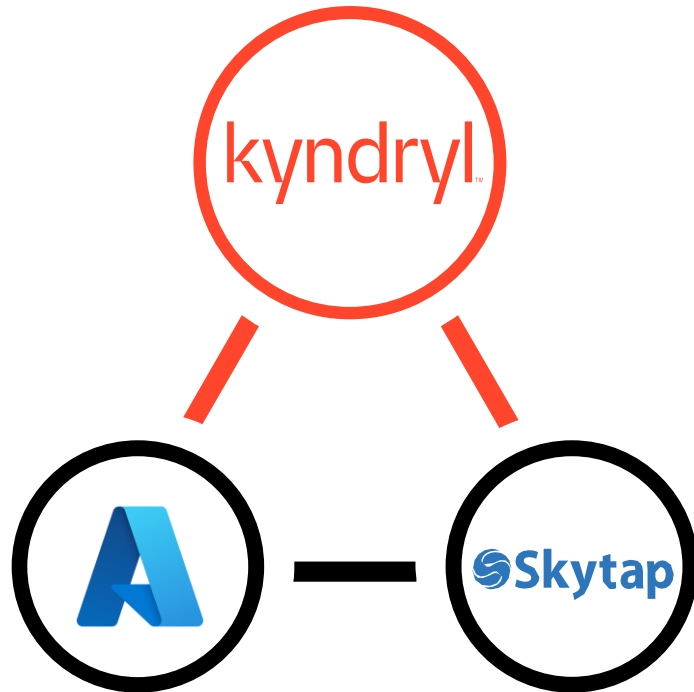
- Demand for public cloud-based enterprise applications is expected to produce a five-year compound annual growth rate (CAGR) of 13.6%, surpassing the 6.7% CAGR for the overall market and overtaking on-premises software in the next several years<sup>2</sup>

# Quick Recap on AIX/POWER

- AIX is an UNIX Operating System developed by IBM
- Enterprise grade with several features for scalability, reliability and high availability
- Kyndryl provides 24x7 service and support for AIX for critical workloads
- Support for the latest industry technologies such as “Live partition mobility”, “Active Memory expansion”, Virtualization, Capacity on demand etc.
- Long support life cycle (10+ years) and optional extended support beyond end of life (3+ years)
- Latest version of AIX is 7.2 released in 2017, AIX 7.1 in 2010, AIX 6.1 was released in 2007
- AIX runs only on POWER servers which use PPC processor architecture
- POWER Servers are built for high degree of redundancy and resiliency, targeted to large enterprise workloads.
- POWER9 was released in 2017
- POWER8 was released Mid 2014
- POWER7 was released in 2010
- AIX 7.1 and POWER7/POWER8 are most widely used in the customer environments. But very few customers have fully moved to AIX 7.2 and POWER9.
- There are legacy workloads on AIX 6.1 or even AIX 5.3.

# Kyndryl's Solution

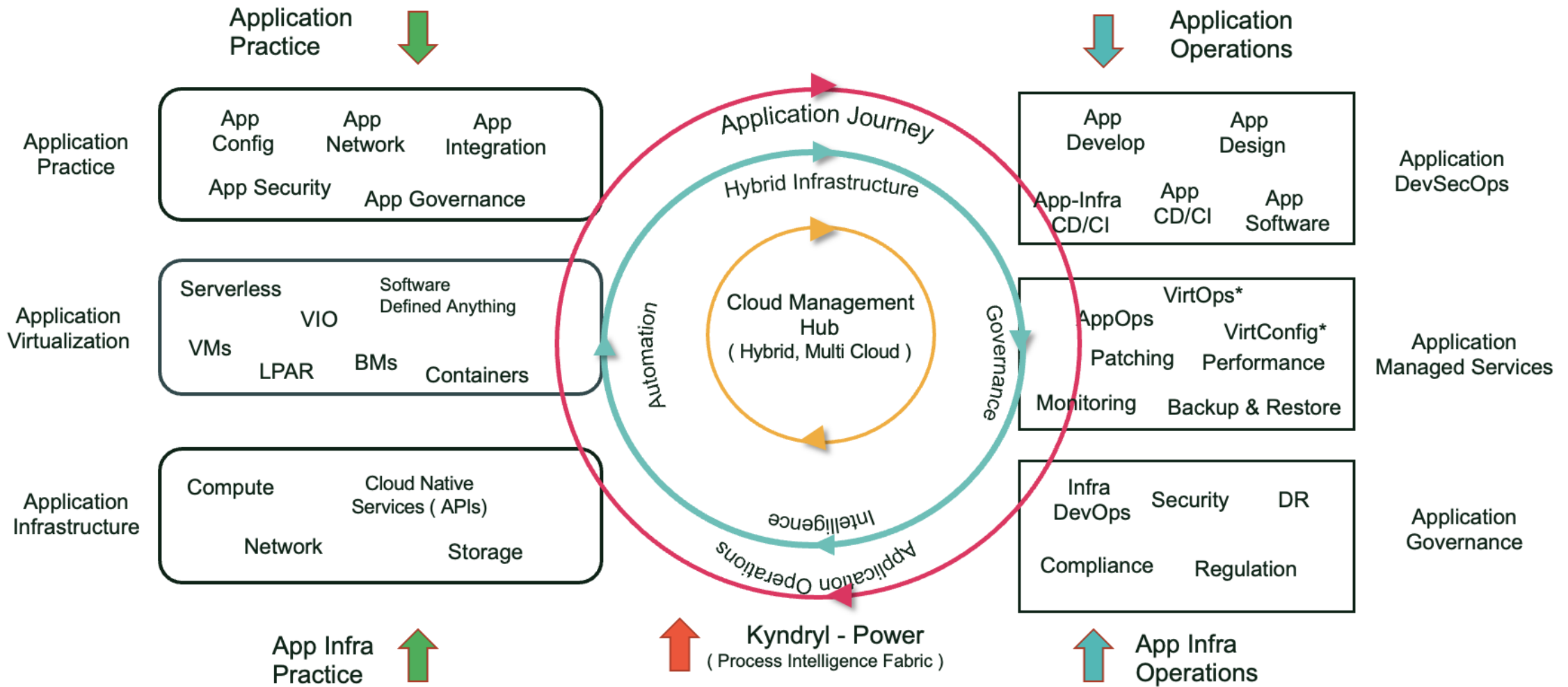
Kyndryl can move Power workloads via Skytap in an OpEx fashion, and integrate workloads with Azure services, utilizing the Kyndryl's Azure expertise to modernize and manage a client's environment



## Kyndryl Power to Azure with Skytap

- Modernization of Power Systems as they are migrated to Azure
  - Increased Efficiency
  - Lower Cost
  - Application integration
- Security and Transparency
  - Data Insights
  - Leading edge security through Kyndryl – Skytap – Azure
- Optimal for Disaster Recovery
- Flexible pricing model for a complete Power Migration solution

# Kyndryl's Power – Process Intelligent Fabric for hybrid and multi cloud environment.



Kyndryl process intelligent fabric provides a reference architecture and solution presented aims to differentiate and define sustainable organization's hybrid, multi-cloud IT for business applications.

# Kyndryl Process

## End-to-End Cloud Power Solution



### EXPERTISE & OFFERINGS

- Cloud Strategy and Optimization
- Business Case Assessment
- Storage Assessment
- Network Assessment
- Automation Assessment
- Cloud and Landing Zone Design
- Strategy and architecture
- Platform and Infrastructure Modernization
- Container Platforms
- Modern Operations and Management



- Design and implement public cloud infrastructures on Azure with experts and tools/IP that provides an optimized, secure, and efficient solution for clients



- AIX & IBMi Workload Migration to Power VMs on Skytap
- AIX & IBMi workload upgrade and migration to Skytap
- SAP migration and modernization from on prem AIX to Skytap on Azure



- Managed infrastructure services for public cloud datacenters and traditional on-premise datacenters. Leverages preconfigured tooling, processes and global delivery to provide optimized and reliable service outcome



# Power to Azure with Skytap: High Level Design

## Infrastructure

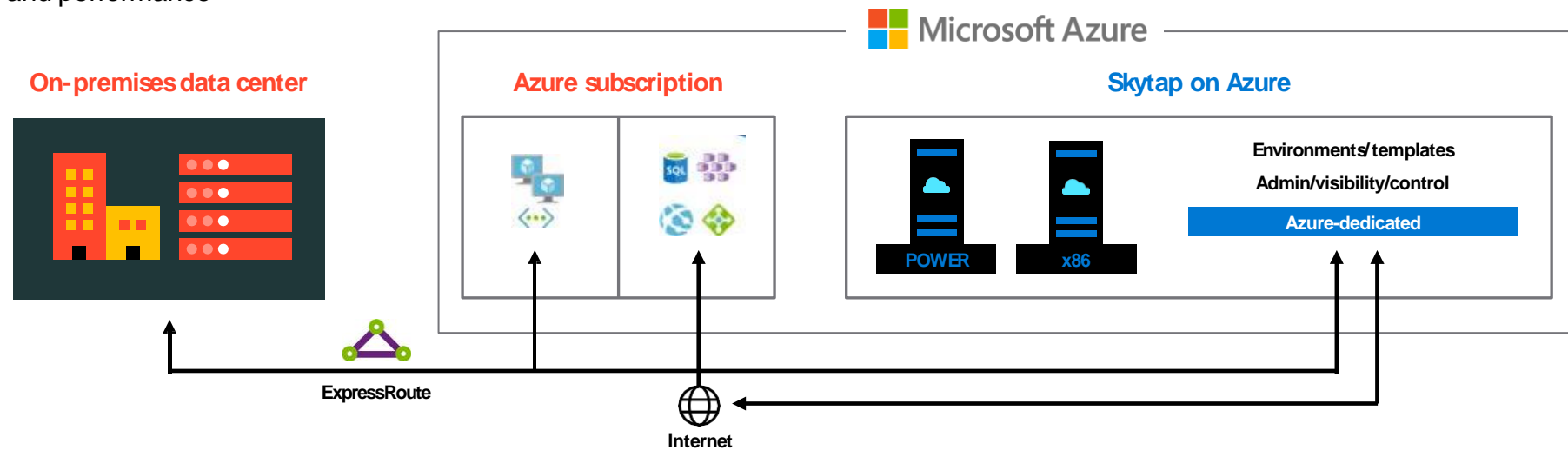
- Fully redundant power supplies and network
- Affinity algorithm determines placement for stability and performance

## Storage

- Self-Encrypting SSDs for data at rest encryption

## Networking

- Fully redundant switching
- Software defined networking



## ExpressRoute

- Use ExpressRoute to securely connect workloads running in Skytap to Azure VNets and your on-premises networks

## Access Azure Services

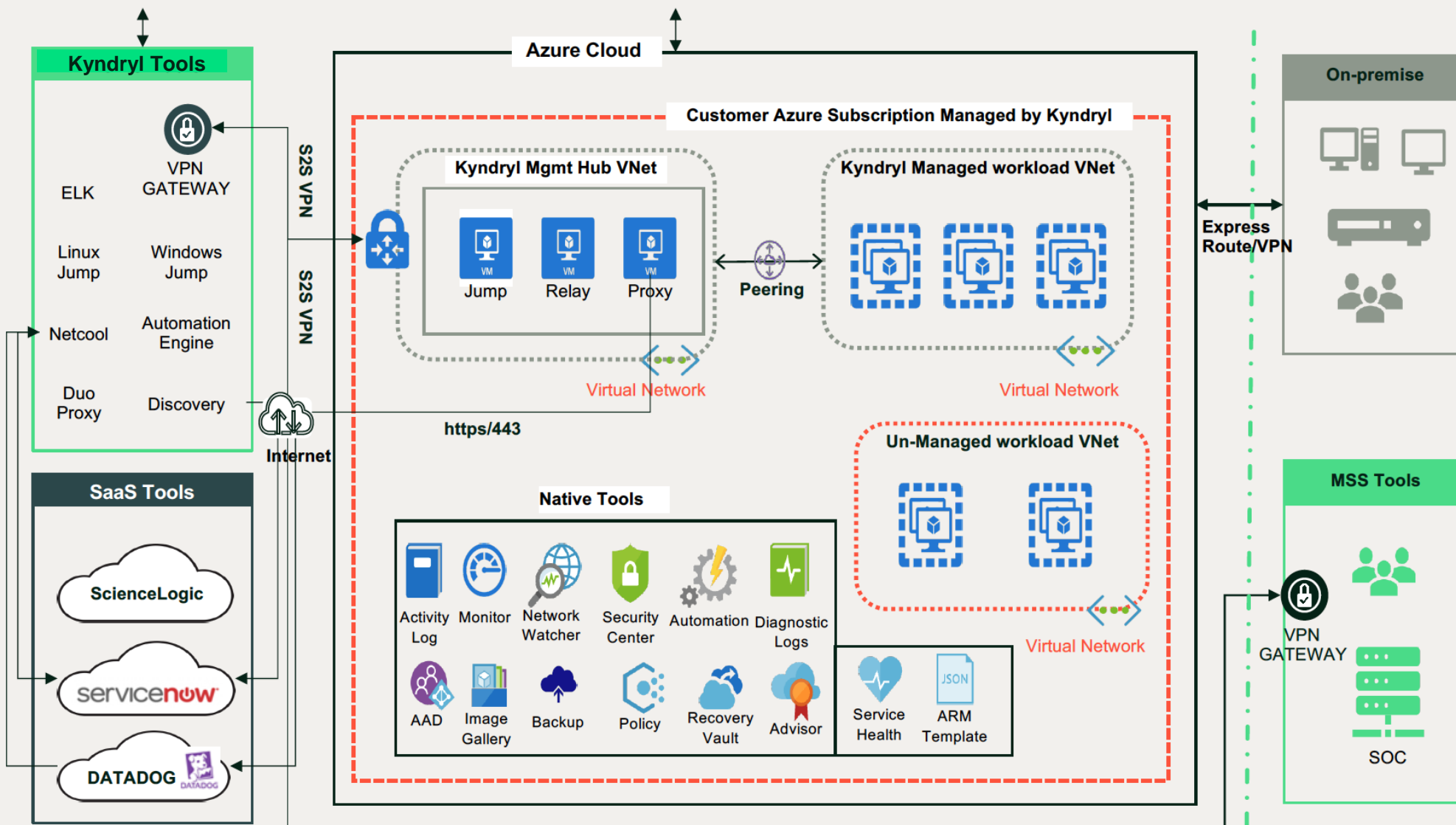
- Low-latency connectivity to Azure Services to extend and transform traditional workloads

## Single Sign-on

- Integrated Single Sign-on (SSO) between Azure Active Directory and Skytap simplifies user management.



# Reference Architecture



## Key Highlights

- Standard, repeatable deployment and connectivity for management services
- Suitable for small and can scale up for large, multi tenant requirements

## Key Benefits

- Faster onboarding for Managed Services
- Scalable, repeatable and aligned to the management best practices

# Kyndryl Engagement Process

## Lab & Testing

Kyndryl will create testing environments for the client to help their decision-making on which cloud platform to utilize and how their tools and apps integrate with their existing assets

## Managed Services

Kyndryl will manage the scope of the work through our patented technology and processes. Client's also will be able to manage their environment with Kyndryl's Cloud Management Platform (KCMP)

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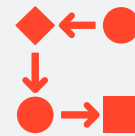
## Advisory & Consultation

Kyndryl specialists will consult with the client to understand the scope of the work and it's relation to the overall business model and approach.

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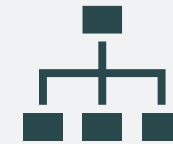
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## Implementation & Migration

Kyndryl's expertise and process will efficiently and effectively implement a solution for the client.

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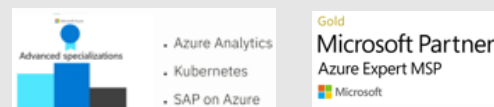
# Differentiators & Value Proposition

## Kyndryl Expertise

- Kyndryl manages the largest IBM systems in the world
- Specialty in Delivery and Migration for IBMi and PowerVS
- Decades of accumulated experience and knowledge of moving enterprise production workloads to the cloud

## Azure Partner

- Kyndryl is a Premier Partner with Microsoft
- Kyndryl has deep Azure expertise with 10k+ certifications
- Kyndryl and Microsoft has a long multi-year partnership with investments from both parties to help clients with their Azure needs



## Industry Leader

- 90,000 skilled professionals
- Industry Leading NPS scores<sup>1</sup>
- 75% of Fortune 100, and more than half of Fortune 500 are Kyndryl customers
- 31,000 vendor-recognized certifications in Microsoft Azure, VMware, Cisco, Red Hat, AWS and more
- Proven and Reliable services – Kyndryl was rated 26% points higher than our nearest competitor for this capability<sup>2</sup>

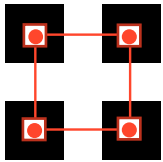
## Broad Coverage

- This solution covers AIX, Linux, IBMi, SAP, etc.
- Ability to run older AIX 6.1 workloads
- Clients will have control access to resources by users, groups, or projects
- Robust feature set and API
- Cloud Native: Runs on Microsoft Azure Dedicated

# Client Stories & Use Cases

# Top use cases

Power workload Migration to Azure



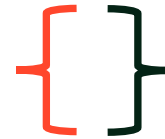
## Production

Run production AIX, IBM i, Linux, and Windows with 99.95% availability and secure connectivity to on-premises apps.



## Disaster recovery

Run cold, warm, or hot disaster recovery environments to ensure business continuity.



## Dev/Test

Increase developer productivity, test coverage, and accelerate DevOps adoption with on-demand application environments.



## Data Modernization

Unlock additional value from your data using Data Analytics and AI.

# Client Story: RIMAC RIMAC

## Client Context

RIMAC, based in Peru, is a premier insurance provider for Latin American markets, covering life, health, accident, home, travel, retirement, vehicle, and corporate insurances

## Business Challenge

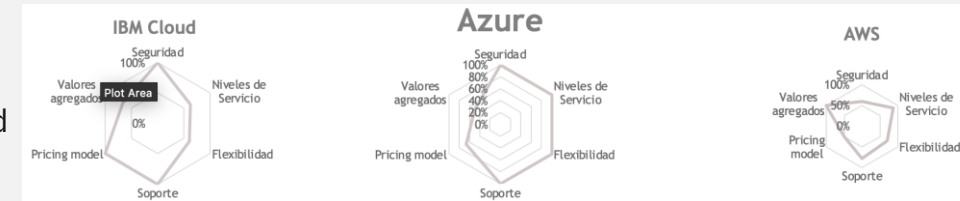
- SBS regulations (SBS is the entity that regulates the insurance and banking companies), a third data center or a secondary datacenter, should be used for DR purposes. This data center needs to be located outside the city where the main DC resides. For this particular scenario, Rimac needed to host the DR workloads outside of the country



KYNDRYL  
TRANSFORMATION

RESULTS

- Kyndryl and Rimac performed a BIA consulting to maintain the continuity of their current production environment.
- Kyndryl's assessment identified Azure over other cloud options



- 197 workloads are being migrated
- 47 applications were identified that should be protected to maintain operational continuity
- Kyndryl has been awarded to conduct a Super Flexible Model for Non-Production (Development) environments for IaaS of RIMAC's infrastructure

# RIMAC - Kyndryl Power to Azure with Skytap

## Architecture

