



## PowerM : Trusted Infrastructure provider Company Profile



## Power Maroc Presentation : General Information

### Power Maroc:

Created in 2011, Power Maroc is an IT Services Company dedicated to the integration of hardware and software infrastructures, virtualization and consolidation solutions, expert systems, converged and hyperconverged infrastructures, as well as cloud computing solutions (IaaS & PaaS)

### Key Notes 2017 :

- ❖ 2017 Turnover: 58 MDH
- ❖ Capital: 8.5 MDH
- ❖ Shareholder: Finance Technology Fund
- ❖ 20 Engineers and Consultants
- ❖ **IBM Platinum Business Partner**
- ❖ **DELL-EMC Gold Business Partner**
- ❖ 10 ressources certified on EMC Storage
- ❖ 12 ressources certified on IBM Storage and IBM Power
- ❖ 5 ressources certified VMware
- ❖ 2 ressources certified EMC VMAX3
- ❖ 2 ressources certified IBM DS8K
- ❖ 3 ressources certified EMC Unity
- ❖ 3 ressources certified EMC DataDomain
- ❖ 7 ressources certified IBM Software (Websphere, Spectrum, DB2,...)

### Award from world class IT Vendor

- ❖ **IBM Platinum Business Partner**
- ❖ EMC Gold Status Middle East, Turkey and Africa Executive DELL/EMC Partner Summit March 2017
- ❖ IBM Outstanding Storage Solution (IBM DS8886 AFA and HyperSwap) – June 2017
- ❖ Fujitsu SAP HANA First to Sell – December 2016
- ❖ IBM Innovation Award Hybrid Cloud Application Platform IBM PureApplication Interconnect February 2015



Dear Power Maroc,

Thank you for your submission for a 2018 IBM Beacon Award in the Outstanding Storage Systems Solution category. Your firm has been selected by IBM as a runner-up (award finalist). Your nomination was among the best of hundreds received and sets the standard for business excellence and client success.

The IBM Beacon Awards recognize IBM Business Partners who have delivered exceptional solutions using IBM products and services. Winners and finalists exemplify what it means to be a trusted business advisor and provide true transformative value to clients.

As a Beacon Award finalist, your firm receives one complimentary registration to the PartnerWorld at Think [IBM PartnerWorld Leadership Conference](#), which will take place in Las Vegas, Nevada, March 20-22. Award winners and finalists will be recognized throughout the conference. To assist you in planning, attached is an outline of the benefits for finalists, and details on how to register for the conference.

Please note, your selection as an IBM Beacon Award finalist should not be shared externally until IBM announces the winners and finalists at the PartnerWorld at Think.

I look forward to seeing you in Las Vegas.

Congratulations,

John Teitsch  
General Manager  
IBM Global Business Partners

Please refer to:  
Company: Power Maroc  
Award: Outstanding Storage Systems Solution  
Beacon Reference ID: 1UHO7PP12U220

# PowerM : Trusted Infrastructure provider Company Profile



## 2012 - DRIVEN BY INNOVATION

- Power Maroc Founded with the objective of helping customers navigate technology and business disruption through innovation
- Strategic Partnership with IBM
  - 1M\$ Turnover

## 2014 - CLOUD BUSINESS FIRST STEPS

- First to implement IBM Hybrid Cloud Solution (PaaS): IBM PureApplication
  - Strategic Partnership with EMC
    - + 15 Enterprise Customers
    - 50% software revenue
    - 3M\$ Turnover



## 2016 - STRATEGIC INFLECTION POINT

- #1 EMC Business Partner
- Finance Technology Fund (FTF) became the effective major shareholder
- +35 Enterprise Customers
- 5M\$ Turnover

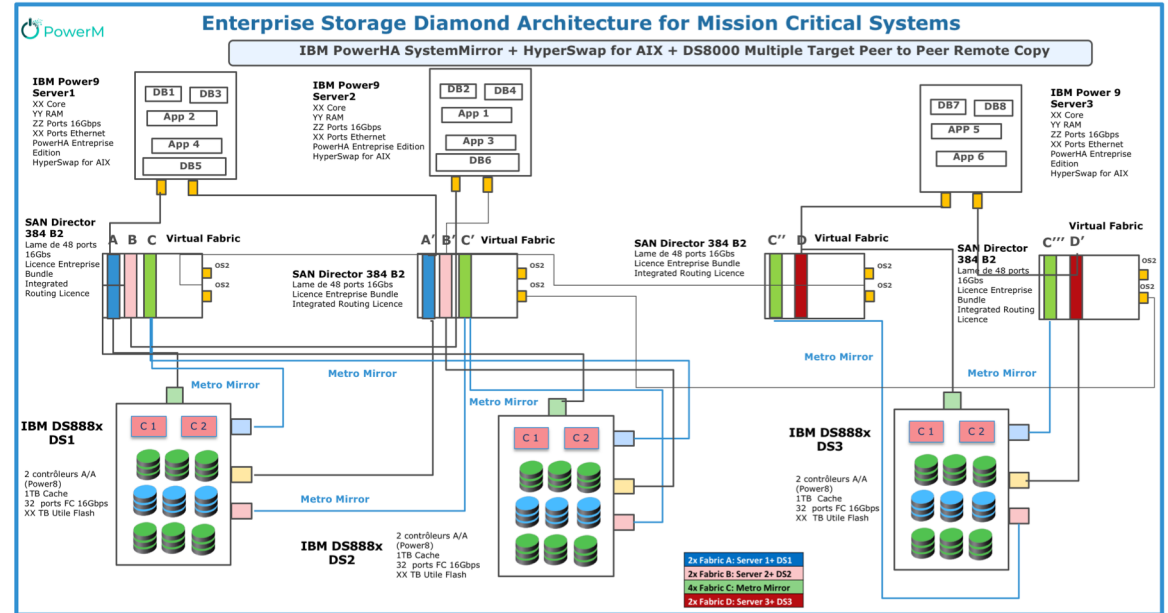
## 2018 - THE NEXT LEVEL

- #1 IBM Business Partner to achieve Platinum Level within the three IBM Specialties (Expert Level)
- DELL Technologies Gold Business Partner (three in a row)
- +60 Enterprise Customers (Target)
  - 8M\$ turnover (Target)





## PowerM Selected as a Finalist for the IBM Beacon Award 2018- Think/PartnerWorld: Outstanding Storage Systems Solution category



Las Vegas 20/03/2018

PowerM selected as a Finalist in 2018 **IBM Beacon Award in the Outstanding Storage Systems Solution category**. PowerM has been selected by IBM as a runner-up (award finalist). PowerM nomination was among the best of hundreds received and sets the standard for business excellence and client success..

The Beacon Awards, an integral part of IBM's Business Partner program, recognize select business partners who deliver exceptional IBM-based solutions that drive business value and transform the way clients and industries do business in the cognitive era. This year's awards honor achievement across 19 solution areas including analytics, collaboration, cloud, commerce, cognitive, the Internet of Things, security, systems and Watson. **Winners and Finalist were selected by a panel of IBM executives, industry analysts, and media members.**





Visit PowerM new portal: <https://www.powerm.ma>



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# Expert in Infrastructure Advice

[Read More >](#)

## PowerM Support Portal is dedicated to helping you succeed

The new Support Portal will help enable you to resolve issues more quickly and efficiently, eliminating costly delays.



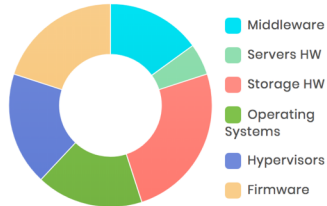
**Step 1**






Contact your PowerM Technical Account Manager to get your credentials.

Your account will be activated within 24 hours

4 simple steps to open service request via PowerM portal



% Support and Service Requests by Category

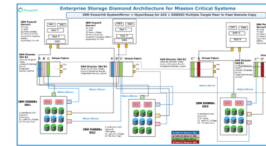
-  PM SUPPORT PORTAL
-  IBM SUPPORT PORTAL
-  EMC SUPPORT PORTAL



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## State-Of-Art Reference Architectures

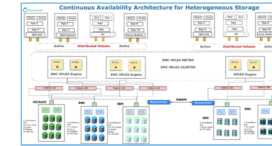
High Availability and Disaster Recovery Infrastructure



### ENTERPRISE STORAGE DIAMOND ARCHITECTURE FOR MISSION CRITICAL SYSTEMS

Over past three years, PowerM received many inquiries for Active-Active solution requirement, e.g.: 7 x 24 Serviceability; Multiple Tier of Data Backup; Multiple Data Centers Built; Better Utilization of Data Center; Enterprise Data Center Switch-over requirements etc.

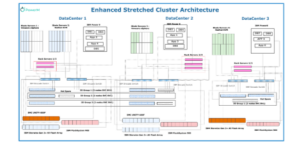
 Reference Architecture



### CONTINUOUS AVAILABILITY ARCHITECTURE FOR HETEROGENEOUS STORAGE


Continuous availability architectures are used by forward-thinking organizations that seek to ensure exceptionally high levels of service availability for mission critical applications. It's a design methodology that provides uninterrupted access to application services and data.

 Reference Architecture



### ENHANCED STRETCHED CLUSTER ARCHITECTURE FOR CONTINUOUS AVAILABILITY PLATFORM

Business continuity and continuous application availability are among the top requirements for many organizations today. In today's increasing business demands, critical applications must be available all of the time. The system also must be fault tolerant to provide continuous...

 Reference Architecture



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## PowerM Portal : We are transforming Support

Main resource for support-related information and resources and provides more transparency into your ticket resolution workflow



### MULTICHANNEL HELPDESK

With PowerM's multichannel helpdesk, our agents can reply to emails, answer customer calls and chat with customers right within the helpdesk.



### PORTAL POWERED BY MANTIS-BT

Rich portal where you can open and manage cases, connect with support engineers, and access extensive self-service resources.



### MANAGED IT SUPPORT

Our Managed IT Services provide regular management of systems that keep your infrastructure up and running, minimizing downtime and maximizing productivity.

## Client References

- Maroc Telecom
- Orange
- Attijari WafaBank
- Royal Air Maroc
- Caisse de Dépôt et de Gestion
- Groupe Crédit Agricole Maroc
- MarocLear
- Maroc Leasing
- Direction Générale des Impôts
- Trésorerie Générale du Royaume
- Centre monétique Interbancaire
- Union Marocaine des Banques
- Al Amana Microfinances
- Ooredoo Algerie
- Jacobs Engineering SA /OCP Group
- Ministère de l'Economie et des Finances
- Direction Générale des Impôts
- Trésorerie Générale du Royaume
- Ministère de Justice et des Libertés
- PortNet
- NewRest
- Instance Centrale de Prévention de la Corruption
- Caisse Nationale de Sécurité Sociale
- Caisse Nationale des Organismes de Prévoyance Sociale
- Caisse Marocaine des Retraites
- Office National des Hydrocarbures et des Mines
- Organisation Marocaine des Droits de l'Homme




Union Marocaine des Banques

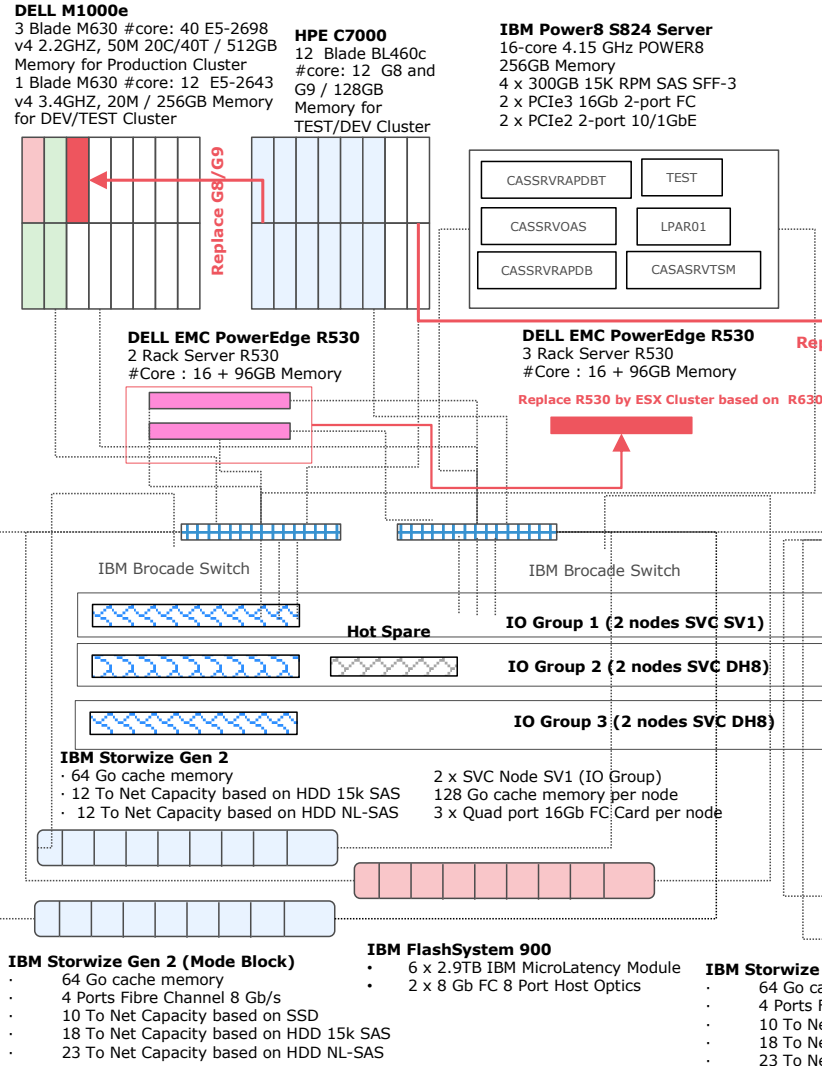




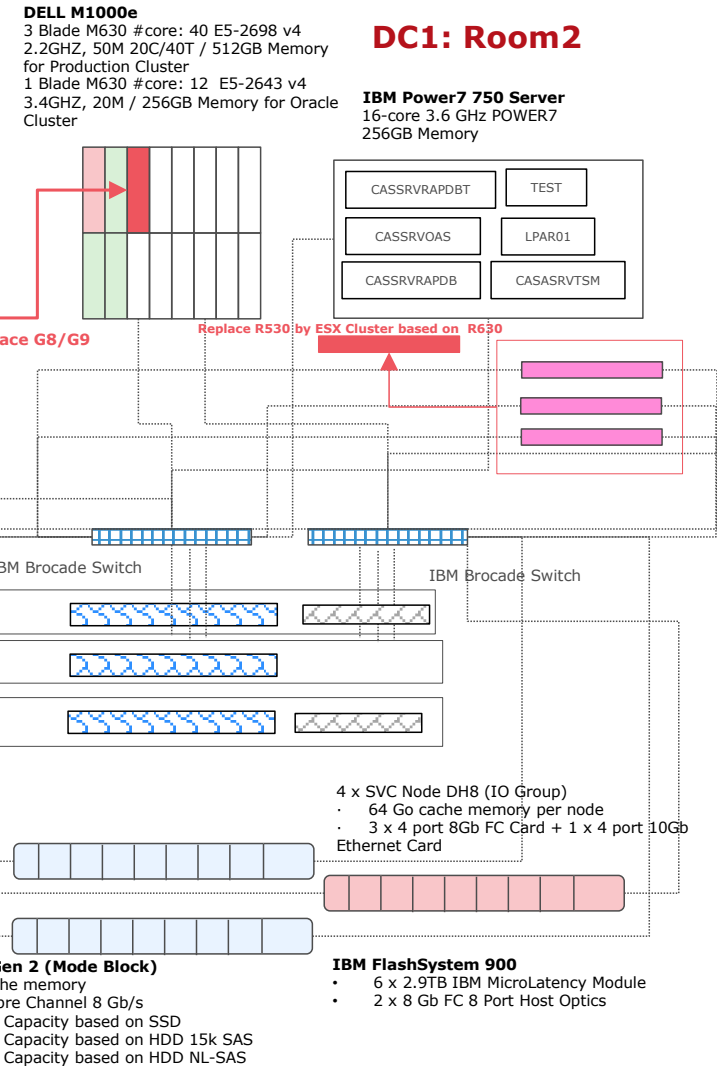
# Royal Air Maroc : Production and local DR infrastructure : Business case

<b>Customer Profile</b>	 <p>الخطوط الملكية المغربية royal air maroc</p>
Industry	Air Transportation
Stockholders	Morocco State (53,94%) Hassan II Fund (44,10%) Air France(1,25%) Iberia (0,42%) Other (0,29%)
Headquarters	Casablanca-Anfa Airport Casablanca, Morocco
Area served	Africa, Asia, Europe, and North and South America
Revenue	US\$ 1.5 billion
Net income (2015)	US\$ 203 million
Number of employees	3,091
Subsidiaries	RAM Cargo RAM Express
Technical Overview	IBM SAN Volume Controller IBM Storwize V7000 IBM FlashSystem900 IBM Power HP/DELL servers Vmware and PowerVM Oracle Databases
keys figures and strategy:	<ul style="list-style-type: none"> <li>• Double the fleet size by 2025</li> <li>• Enhance key KPI (International Flights, Europe Flights, Flights Africa ,Internal flights ,filling rate ,Punctuality rate, satisfaction rate,...)</li> <li>• 3-4 US\$ billion investment for the next 10 years</li> <li>• Support the sectoral strategies in Morocco (Vision 2020 for Tourism, Industrial Acceleration Plan, Plan Maroc Vert, ...)</li> <li>• Contributor to support Morocco African vision</li> </ul>

## DC1: Room1



## DC1: Room2

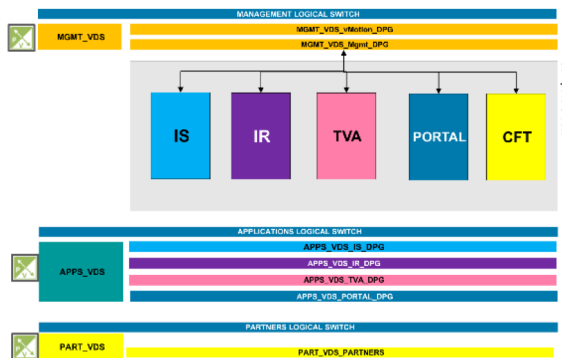




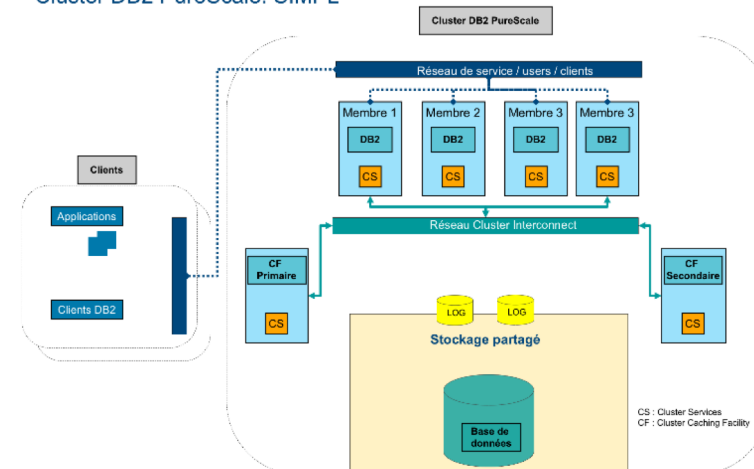
## General Administration of Taxes : Infrastructure Tech Refresh e-Services taxes: Business case

<b>Customer Profile</b>	<p>المديرية العامة للضرائب +ⵎⵔⵉⵙⵉ ⵜⵉⵎⵓⵏⵏⵉⵢⵓⵔ ⵉⵏⵓⵔⵉⵎⵉⵙⵉ DIRECTION GÉNÉRALE DES IMPÔTS</p>
Part of	Moroccan Ministry of Finance
Industry	Government
Headquarters	Direction Générale des Impôts –Rabat Agdal ,Rabat, Morocco
Area served	Morocco
Products/Solutions	<p>The General Tax Administration manages mainly four state taxes (Corporate tax, income tax, value added tax, registration and stamp duties).</p> <p>It is also responsible for managing three local taxes on behalf of local authorities (business tax, tax on dwellings and tax on communal services).</p>
Population Fiscale	414 674 (as per 2016)
Telepaiement	79% (as per 2016)
Païement classique	21% (as per 2016)
Subscribers	232024 (as per 2016)
Recettes nettes 2016 par impôt	US\$ 4.3 Billion (as per 2016)
Number of employees	5079
Technical Overview	<p>IBM Power8 IBM SAN Volume Controller IBM DS8000 DELL Servers DB2 PureScale Oracle Real Application Cluster Tivoli Directory Server IBM AIX, Linux Redhat and Vmware Vmware NSX Microsoft Exchange</p>

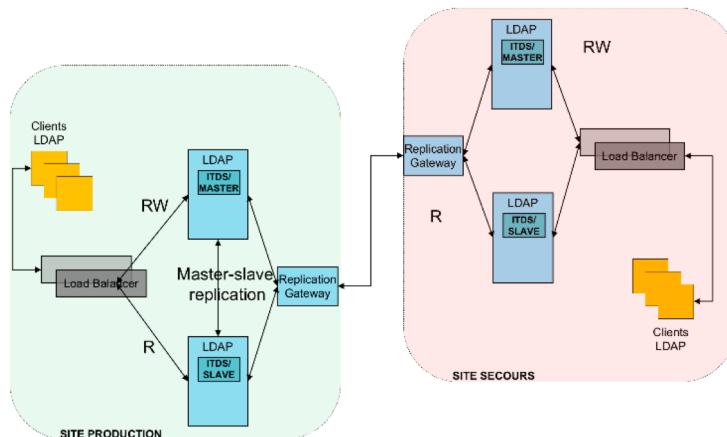
VDS & distributed port groups



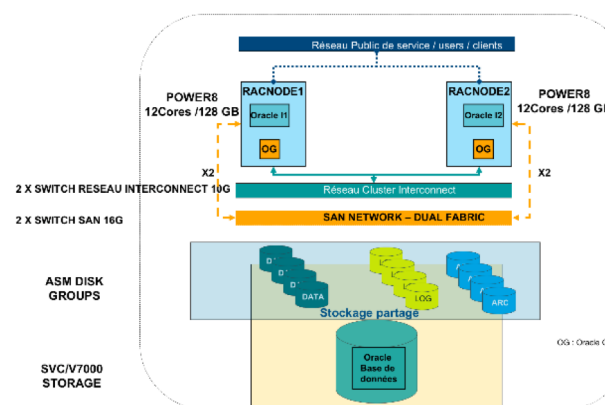
Cluster DB2 PureScale: SIMPL



ITDS – HIGH LEVEL ARCHITECTURE



Cluster de base de données Oracle RAC- TSAVA



# PowerM Attijari WafaBank: Subsidiaries Infrastructure consolidation Business case

<b>Customer Profile</b>	 التجاري وفا بنك Attijariwafa bank
Traded as	MASI : <b>ATW</b>
Industry	Banking, Financial Services
Founded	1904: Creation of Wafabank 1911: Creation of BCM 2003: Creation of Attijariwafa Bank
Headquarters	20 000 Casablanca 2, Bd Moulay Youssef, Morocco
Number of locations	3972 branches
Area served	Africa – Tunisia – Egypt
Products	Credit cards, consumer banking, corporate banking, finance and insurance, investment banking, mortgage loans, private banking, private equity, savings, Securities, asset management, wealth management
Revenue	US\$ 2,6 billion
Net income	US\$ 475 million
Total assets	US\$ 43 billion
Total equity	US\$ 4,7 billion
Number of employees	17 669
Subsidiaries	Attijari – Wafa Assurance – Wafasalaf – Wafa Immobilier – CBAO – Union Gabonaise de Banque – Crédit du Congo – BIM SA – Crédit du Sénégal – Société ivoirienne de banque – SCB Cameroun – BIA Togo – Attijari bank Mauritanie – Barclays Bank Egypt – CobeBanque

## Business Need:

- Expand the market share in Africa
- Embrace the Omnichannel digital banking trend without compromising on data availability or efficiency.
- Consolidate the core banking systems for all African Subsidiaries
- Reduce total cost of ownership (TCO)
- Homogenous disaster recovery plan for all African Subsidiaries
- Compliance with banking systems rules

## Challenge:

- Consolidate multiple banking systems in one platform (with the DR)
- Different time zone with different SLA
- Data Migration Challenge
- Monitoring and charge back
- Performance optimization for OLTP and Batch processing

## Key Technical drivers:

- Performance for critical enterprise applications such as real-time operational analytics and online transaction processing.
- Optimized systems for extreme performance with High-Performance Flash Enclosure Gen2.
- Extensive server platform support with special integration with IBM Power server platforms.
- Flexible configuration options, advanced tiering and automated quality-of-service management to support systems of insight and cloud initiatives.
- Resiliency and world-class business continuity for critical enterprise applications.
- Optimizes real-time workload requirements with dynamically self-tuning cache usage for transformational efficiency
- Flexible business-continuity scenarios with true 2-way and multi-site data replication, in a wide range of configurations
- Continuous access to data during planned and unplanned system and site outages

**Business and service Partner: Power Maroc**  
**Vendor : IBM**  
**Revenue : US\$ 1.8 million**  
**Year : 2017**



Solution proposed by Power Maroc					
<b>SLA</b> 24h/24h and 7d/7d	<b>RPO</b> Near Zero	<b>RTO</b> Zero	<b>Dual site</b> Yes	<b>Distance between datacenter</b> 8 km	<b>Links between datacenter</b> DWDW (4 to 8 Gbps)
<b>Hosts</b>	<b>OS</b> AIX 7.1 PowerVM	<b>Databases</b>	<b>Applications/ERP</b> Delta Banking System	<b>Storage</b> IBM DS8886 (All Flash Array) 170TB Site 1 + 130 TB Site 2	<b>SAN</b>
IBM Power8	<b>Monitoring</b> IBM Spectrum	Oracle Database	<b>Disaster Recovery 3th Site</b>	<b>Replication</b> DS8000 Multiple Target Peer to Peer Remote Copy	IBM SAN Director B256B
<b>High Availability</b>	Control Advanced Edition	Yes	Yes planned for 2019		<b>Backup/Restore</b> IBM Spectrum Protect
IBM PowerHA SystemMirror + HyperSwap for AIX					



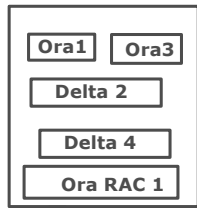


# Attijari WafaBank - AWB: IBM Diamond Architecture (RPO=RTO= Zéro)

IBM PowerHA SystemMirror + HyperSwap for AIX + DS8000 Multiple Target Peer to Peer Remote Copy

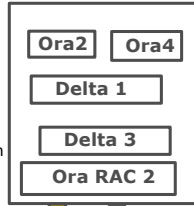
### IBM Power8 Server1

XX Core  
YY RAM  
ZZ Ports 16Gbps  
XX Ports Ethernet  
PowerHA Enterprise Edition  
HyperSwap for AIX



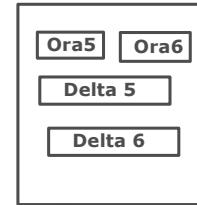
### IBM Power8 Server2

XX Core  
YY RAM  
ZZ Ports 16Gbps  
XX Ports Ethernet  
PowerHA Enterprise Edition  
HyperSwap for AIX



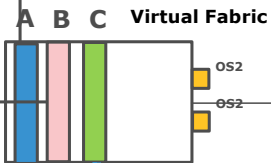
### IBM Power8 Server3

XX Core  
YY RAM  
ZZ Ports 16Gbps  
XX Ports Ethernet  
PowerHA Enterprise Edition  
HyperSwap for AIX

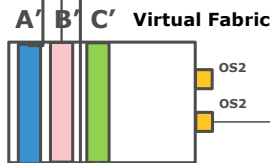


### SAN Director 384 B2

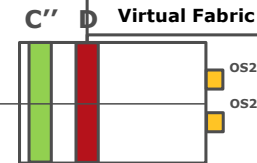
Lame de 48 ports 16Gbps  
Licence  
Entreprise Bundle  
Integrated Routing Licence



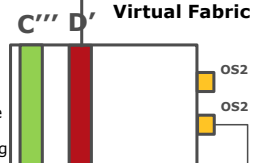
SAN Director 384 B2  
Lame de 48 ports 16Gbps  
Licence Entreprise Bundle  
Integrated Routing Licence



SAN Director 384 B2  
Lame de 48 ports 16Gbps  
Licence Entreprise Bundle  
Integrated Routing Licence

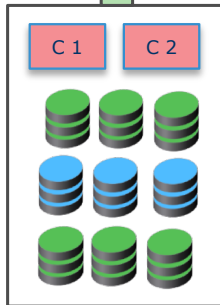


SAN Director 384 B2  
Lame de 48 ports 16Gbps  
Licence Entreprise Bundle  
Integrated Routing Licence



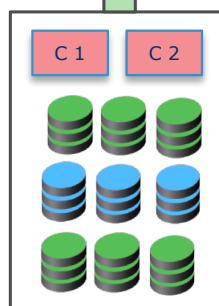
### IBM DS8886 DS1

2 contrôleurs A/A (Power8)  
512 Go Cache  
16 ports FC/16Gbps  
172 TB Utile Flash



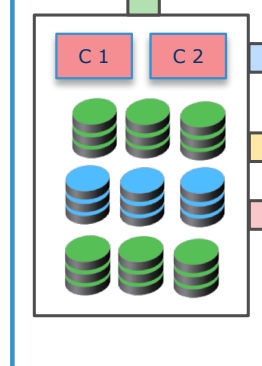
### IBM DS8886 DS2

2 contrôleurs A/A (Power8)  
512 Go Cache  
16 ports FC  
16Gbps  
130 TB Utile Flash



### IBM DS8886 DS3

2 contrôleurs A/A (Power8)  
512 Go Cache  
16 ports FC  
16Gbps  
130 TB Utile Flash



- 2x Fabric A: Server 1+ DS1
- 2x Fabric B: Server 2+ DS2
- 4x Fabric C: Metro Mirror
- 2x Fabric D: Server 3+ DS3

# Orange Maroc- Tech Refresh IBM Power 7 to IBM High End E880C Power 8

<b>Customer Profile</b>	
Industry	Telecommunications
Stockholders	Orange (49 %) Finance Com (25,5 %) CDG (25,5 %)
Headquarters	Orange HQ Tour – Sidi Maarouf ,Casablanca, Morocco
Area served	Morocco
Products	Land line phones, Mobile phone lines, Internet access, <a href="#">4G+</a>
Revenue	US\$ 515 million
Net income	US\$ 48 million
Number of employees	2500

## 2 serveurs IBM Power E880C identiques avec chacun:

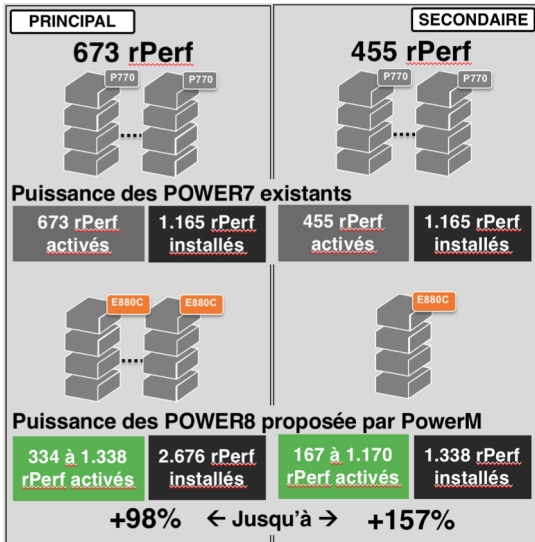
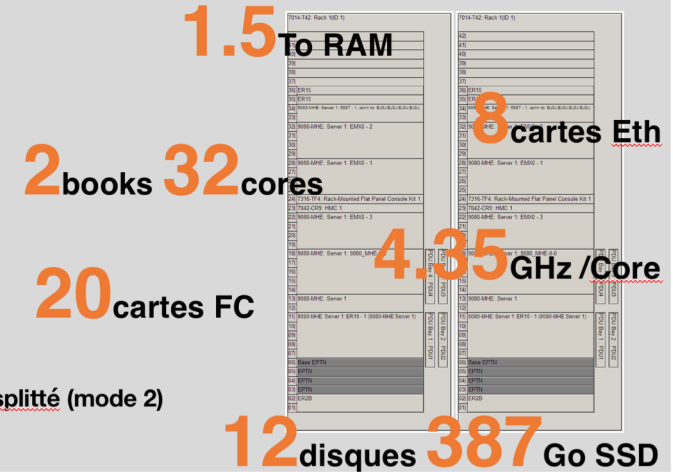
Console HMC avec écran  
Rack T42 avec les PDUs nécessaires  
2 Books de 32 cores 4.35GHz  
- Extensible à 4 Books (128 cores)  
1.5 To de RAM

### I/O

- Répartis sur 2 I/O Drawers
- 20 Cartes Fibre Channel 16Gb/s Dual-Port
- 8 Cartes Ethernet 10Gb/s SR Quad-Port
- Paire redondante de contrôleurs SAS RAID
- Carte USB

### DVD-RAM

12 disques 387 Go SSD dans un tiroir disque splitté (mode 2)  
Licences AIX Enterprise Edition  
Licences PowerHA Standard Edition



## Un serveur IBM Power E880C

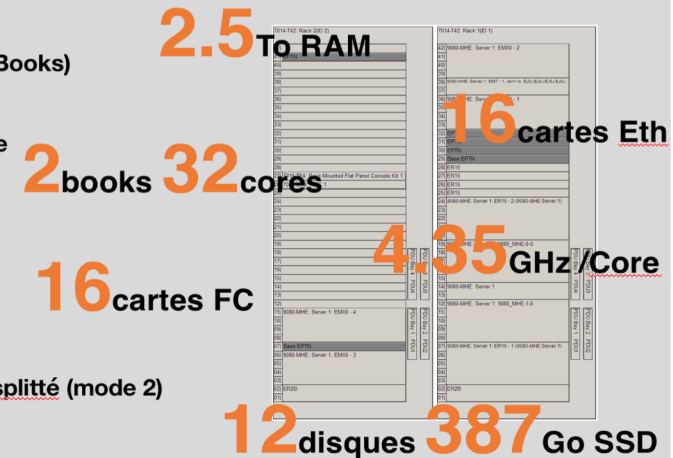
Console HMC avec écran  
Rack T42 avec les PDUs nécessaires  
2 Books de 32 cores 4.35GHz (Extensible à 4 Books)  
2.5 To de RAM

### I/O presque doublé par rapport à une machine du site principal

- Répartis sur 4 I/O Drawers et slots internes
- 36 Cartes Fibre Channel 16Gb/s Dual-Port
- 16 Cartes Ethernet 10Gb/s SR Quad-Port
- Paire redondante de contrôleurs SAS RAID
- Carte USB

### DVD-RAM

12 disques 387 Go SSD dans un tiroir disque splitté (mode 2)  
Licences AIX Enterprise Edition





# Maroc Telecom –IAM (1)–Hybrid Cloud Application : Business case

<b>Customer Profile</b>	
Traded as	EuroNext Paris : <b>IAM</b> MASI : <b>IAM</b>
Industry	Telecommunications
Stockholders	EAU Etisalat (53,09 %) Morocco State (30,00 %) Stock Exchange (16,82 %) Personnel (0,01 %) Auto-detention (0,08 %)
Headquarters	Maroc Telecom HQ Tour – Hay RIAD ,Rabat, Morocco
Area served	Morocco, Niger, Ivory Coast, Benin, Mauritanie, Mali, Burkina Faso, Gabon, Togo, Benin
Products	Land line phones, Mobile phone lines, Internet access, <a href="#">4G+</a>
Revenue	US\$ 3,5 billion
Net income	US\$ 559.8 million
Total assets	US\$ 12billion
Number of employees	11 807
Subsidiaries	Maroc Menara Maroc Casanet Mauritanie Mauritel Burkina Faso Onatel Gabon Gabon Télécom Mali Sotelma Bénin Bénin Télécoms Moov Togo Moov Bénin Moov Côte-d'Ivoire Moov Niger Moov Centrafrique Medi 1 TV

## Business Need:

- Enhance user experience and satisfaction
- Compliance with Maroc Telecom Disaster Recovery Plan
- Reduce cost of Oracle and Websphere License
- Reduce complex administration task
- Reduce total cost of ownership (TCO)
- Homogenous disaster recovery plan for all enterprise application

**Business and service Partner: Power Maroc**  
**Vendor : IBM**  
**Revenue : US\$ 1.7 million**  
**Year : 2015-2016**

## Challenge:

- Migrate 18 in house J2EE application from heterogeneous platforms (HPUX, AIX, Linux, Windows) (different versions 6.x to 8.x) to one consolidate platform
- Design and implement multiple pattern including Oracle and Oracle RAC
- Shot migration window
- Complex migration path (6.x to 8.x) (in house applications)
- Integration with the existing DevOps platform based on Rational UrbanCode

## Overview:

IBM PureApplication helped Maroc Telecom to deploy application environments quickly and repeatedly for both on-premises and off-premises cloud landscapes. App deployment normally requires scripting and configuring the tasks to deploy and manage an application, its environment and the underlying infrastructure.

IBM PureApplication simplifies and automates these tasks and processes to accelerate application delivery, lower costs and reduce errors:

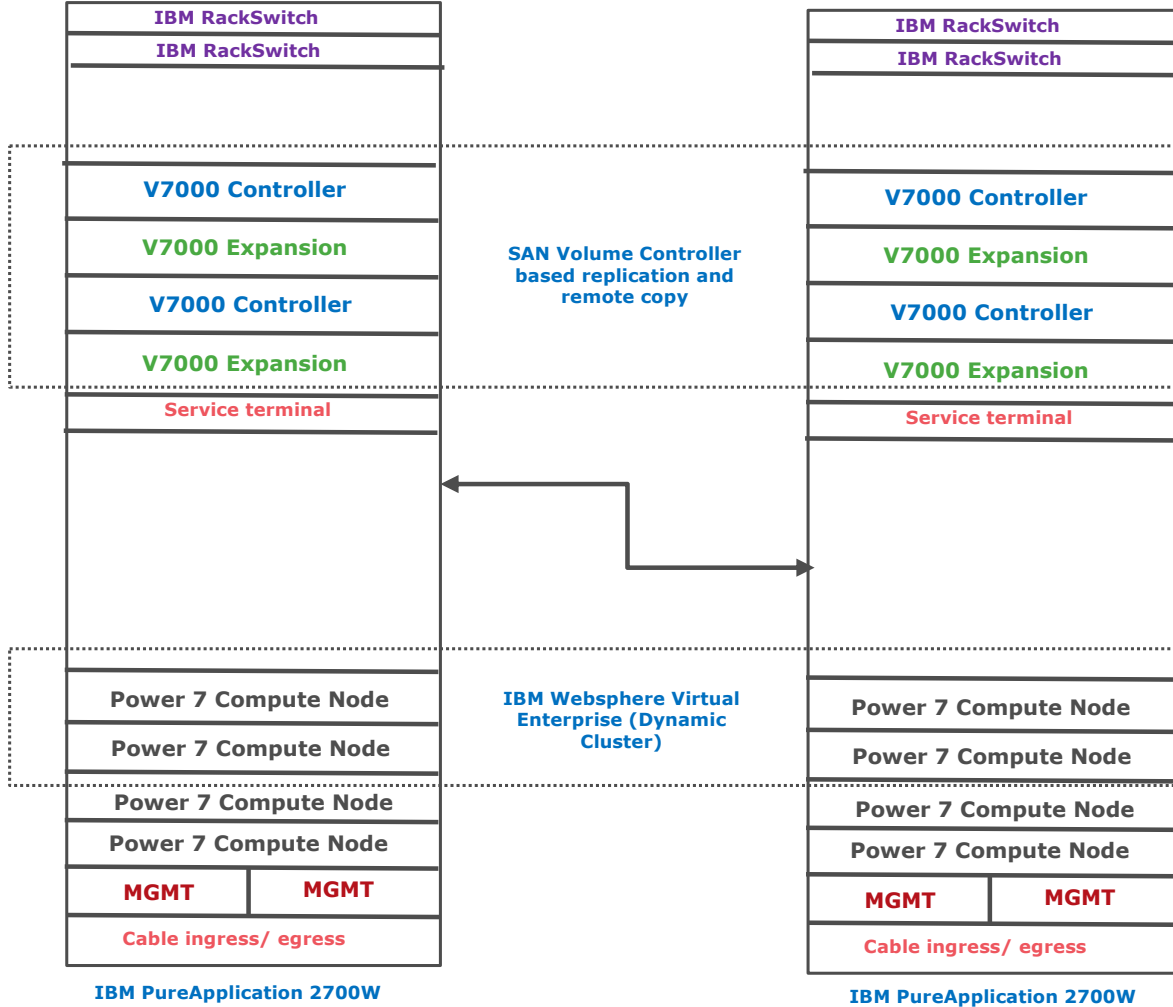
- Enhance performance **by 37% (average for all application)**
- Accelerate deployment of applications **(from days to hours)**
- Reduce administrative task **(by 70%)**
- Efficiently manage, maintain and operate deployed application environments.
- Execute repeatable patterns for fast, seamless and reliable deployments.
- Simplify application lifecycle management

## Solution proposed by Power Maroc

SLA	RPO	RTO	Dual site	Distance between datacenter	Links between datacenter
24h/24h and 7d/7d	Near Zero	Near Zero	Yes	40 km	DWDW (4 to 8 Gbps)
Hosts	OS	Databases	Applications/ERP	Storage	SAN
IBM Power 7	AIX 7.1	Oracle Database	18 in house J2EE applications	IBM Strowize V7000	IBM Brocade
IBM PureApplication	PowerVM	DB2 Database			IBM Brocade
High Availability	Monitoring	Disaster Recovery	Virtualization	Replication	Backup/Restore
IBM PowerHA SystemMirror + Websphere Virtual Enterprise	IBM Tivoli Monitoring	Yes	PowerVM Websphere Virtual Enterprise IBM SAN Volume Controller	IBM SAN Volume Controller	Veritas NetBackup



# Maroc Telecom: IBM PureApplication Hybrid Cloud Application Platform




application	VM name	Cloud Group	# vCPU	RAM (GB)	storage (GB)	SW component
WIAM	purelab60-365-DmgrWiam.11457970769086	Shared	0.1	4	60	IBM DMGR
WIAM	purelab56-336-WiamCustomNode.11443537816439	Shared	0.2	14	60	IBM WAS
WIAM	purelab47-377-DmgrWiam.11460385488744	Shared	0.1	4	60	IBM DMGR
WIAM	waspure22-321-DmgrNode.11434629096209	Shared	0.2	6	30	IBM DMGR
WIAM	waspure26-361-DmgrWiam.11450778363680	Shared	0.1	4	60	IBM DMGR
WIAM	waspure30-379-DmgrNode.11469616222020	Shared	0.1	4	30	IBM DMGR
INFRA	purelab50-324-ITM-Data-Warehouse.11435320109906	Shared	0.2	7	270	ITM
WIAM	purelab53-342-WiamCustomNode.11447757854566	Shared	0.2	8	60	IBM WAS
WIAM	purelab58-363-DmgrWiam.11457970697993	Shared	0.4	14.75	60	IBM DMGR
WIAM	waspure23-322-CustomNode.11434629096210	Shared	0.4	16	30	IBM WAS
WIAM	purelab44-374-IHSNode.11460385488741	Shared	0.1	4	60	IBM IHS
WIAM	waspure25-360-WiamCustomNode.11450778363679	Shared	0.2	8	60	IBM WAS
WIAM	purelab59-325-ITM-Remote-TEMS.11435320109907	Shared	0.1	6	70	ITM
INFRA	purelab49-323-ITM-Hub-TEMS.11435320109905	Shared	0.2	8	70	ITM
INFRA	Lab-purelab51-	Shared	0.2	4	31	IBM IHS
FORMATION	purelab54-341-StandAloneNode.11445263655592	Shared	0.1	4	30	IBM WAS
WIAM	purelab57-337-DmgrWiam.11443537816440	Shared	0.1	4	60	IBM DMGR
WIAM	purelab59-364-WiamCustomNode.11457970769085	Shared	0.2	8	60	IBM WAS
WIAM	purelab46-376-WiamCustomNode.11460385488743	Shared	0.1	4	60	IBM WAS
WIAM	waspure26-378-IHSNode.11469616222019	Shared	0.1	4	30	IBM IHS
WIAM	purelab55-362-WiamCustomNode.11457970697992	Shared	0.1	4	60	IBM WAS
FORMATION	waspure35-380-CustomNode.11469616222021	Shared	0.1	4	30	IBM WAS
WIAM	purelab45-375-WiamCustomNode.11460385488742	Shared	0.1	4	60	IBM WAS
WIAM	purelab58-343-DmgrWiam.11447757854567	Shared	0.1	4	60	IBM DMGR
WIAM	waspure6-332-DmgrWiam.11437924526760	ExternalShared	0.2	6	60	IBM DMGR
GRC	waspure5-263-CustomNode.11425051593742	ExternalShared	1.6	58.75	220	IBM WAS
WIAM	waspure15-331-WiamCustomNode.11437924526758	ExternalShared	0.8	19.75	215	IBM WAS
WIAM	waspure2-330-IHSNode.11437924526756	ExternalShared	0.4	8	153	IBM IHS
FORMATION	waspure9-333-StandAloneNode.1144362283313	ExternalShared	0.1	4	30	IBM WAS
INFRA	waspure28-155-OS_Node.11423675866491	ExternalShared	0.2	4	842	OS
GRC	waspure3-171-CustomNode.21425051593743	ExternalShared	1.6	58.75	220	IBM WAS
GRC	waspure1-170-DmgrNode.11425051593741	ExternalShared	0.8	16	70	IBM DMGR
WIAM	waspure10-246-IHSNode.21437924526757	ExternalShared	0.4	8	153	IBM IHS
INFRA	waspure37-73-OS_Node_1.11423675866492	ExternalShared	0.2	4	1242	OS
INFRA	waspure33-236-StandAloneNode.11432913581876	ExternalShared	0.2	4	30	IBM WAS
INFRA	waspure9-240-ITM-TEMS.114436945282070	ExternalShared	0.1	6	70	ITM
WIAM	waspure13-247-WiamCustomNode.21437924526759	ExternalShared	0.8	19.75	215	IBM WAS
WIAM	waspure34-248-StandAloneNode.11446757904471	ExternalShared	0.2	4	30	IBM WAS
WIAM	purelab37-244-CustomNode.11437918178501	Shared	0.8	19.75	30	IBM WAS
GRC	purelab43-196-CustomNode.11427130043834	Shared	0.4	10	30	IBM WAS
GRC	waspure18-Custom Node-GRC-WebSphereCluster-56	Shared	0.1	16	50	IBM WAS
GRC	purelab40-180-DmgrNode.11426941120346	Shared	0.4	10	30	IBM WAS
WIAM	waspure24-245-CustomNode.21437918178502	Shared	0.8	24.5	30	IBM WAS
INFRA	waspure12-67-OS_Node.11423146009321	Shared	0.1	5	30	OS
INFRA	waspure14-172-ITM-TEMS.11425291161896	Shared	0.1	6	70	ITM
GRC	waspure17-Custom Node-GRC-WebSphereCluster-55	Shared	0.2	18	50	IBM WAS
GRC	purelab41-191-CustomNode.11426941120347	Shared	0.4	10	30	IBM WAS
WIAM	purelab36-243-DmgrNode.11437918178500	Shared	0.8	24.5	30	IBM DMGR
WIAM	purelab38-197-DmgrNode.11427306278703	Shared	0.2	6	30	IBM DMGR
GRC	waspure16-IHS Only Node-GRC-WebSphereCluster-54	Shared	0.1	8	50	IBM IHS
GRC	purelab39-198-CustomNode.11427306278704	Shared	0.4	9	30	IBM WAS
GRC	waspure11-DMGR-GRC-WebSphereCluster-53	Shared	0.2	8	50	IBM DMGR
GRC	purelab42-195-DmgrNode.11427130043833	Shared	0.4	16	30	IBM DMGR
GRC	waspure19-59-DmgrNode.11421239065333	Shared	0.4	8	30	IBM DMGR
GRC	waspure20-60-CustomNode.11421239065334	Shared	0.8	16	70	IBM WAS

- IBM Power 7
- IBM AIX 7 Enterprise Edition
- IBM PowerVM
- IBM SAN Volume Controller
- IBM Storwize V7000
- IBM OS Image for Power Systems™ ( AIX 6.1 and AIX 7.1)
- WebSphere Application Server Hypervisor Edition V7 or V8 with Intelligent Management Pack
- WebSphere Application Server Hypervisor Edition V8.5
- DB2 9.7 FP8 and DB2 10.1 FP2 Enterprise Server Edition Hypervisor
- IBM Web Application Patter V1 (with WebSphere Application Server V7
- IBM Web Application Pattern V2 (with WebSphere Application Server V8)
- IBM Transactional Database for Cloud V1.1 (with DB2 V9.7 FP8 and V10.1 FP2)
- IBM Data Mart for Cloud V1.1 (with DB2 V9.7 FP8 and V10.1 FP2)
- IBM Application Pattern for Java™ V1 (64-bit Java 7 SDK)
- IBM Licence Metric Tool
- Oracle Dababase and Oracle RAC Patterns



# Groupe Crédit Agricole Maroc –GCAM- Infrastructure consolidation : Business case

<b>Customer Profile</b>	
<b>Industry</b>	Banking, Financial Services
<b>Stockholders</b>	Moroccan State (75,17%) MAMDA - MCMA (9,83%) CDG(10,00%) ATLANTA - SANAD (5,00%)
<b>Headquarters</b>	Place des Alaouites, BP.49, 10 000, Rabat, Morocco
<b>Profil</b>	GCAM is a Moroccan bank with public capital. In the past, oriented towards agriculture, the banking network has diversified from the 1990s to agribusiness, mortgage financing and then to all sectors of the economy.
<b>Products</b>	Credit cards, consumer banking, corporate banking, investment banking, mortgage loans, private banking, savings
<b>Revenue</b>	US\$ 180 Million
<b>Net income</b>	US\$ 27.1 million
<b>Number of employees</b>	3 800
<b>Subsidiaries</b>	Assalaf AL Akhdar CAM Gestion Holdagro Tamwil Al Fellah Fondation Crédit Agricole du Maroc pour le Développement Durable Fondation Crédit Agricole du Maroc pour les Arts et le Patrimoine Rural Fondation ARDI

## Business Need:

- Enhance RPO and RTO
- Compliance with GCAM Disaster Recovery Plan
- Reduce complex administration task
- Reduce total cost of ownership (TCO)
- Reduce Batch processing time
- Homogenous virtualization and replication for all high end storage

**Business and service Partner: Power Maroc and Corporate Software**  
**Vendor : DELL-EMC**  
**Revenue : US\$ 750k\$**  
**Year : 2016-2017**

## Challenge:

- Virtualization of existing IBM Storage (XIV Gen1, XIV Gen2, DS48000)
- Short migration windows
- Flexible RPO and RTO per application / storage subsystem
- Continuous data protection with multiple recovery points to restore applications instantly to a specific point in time
- Tape and backup migration from IBM ProtectTier/IBM LTO Tape Library TS to EMC DataDomain
- Minimize network utilization
- Reduce replicated data over the network.

## Overview:

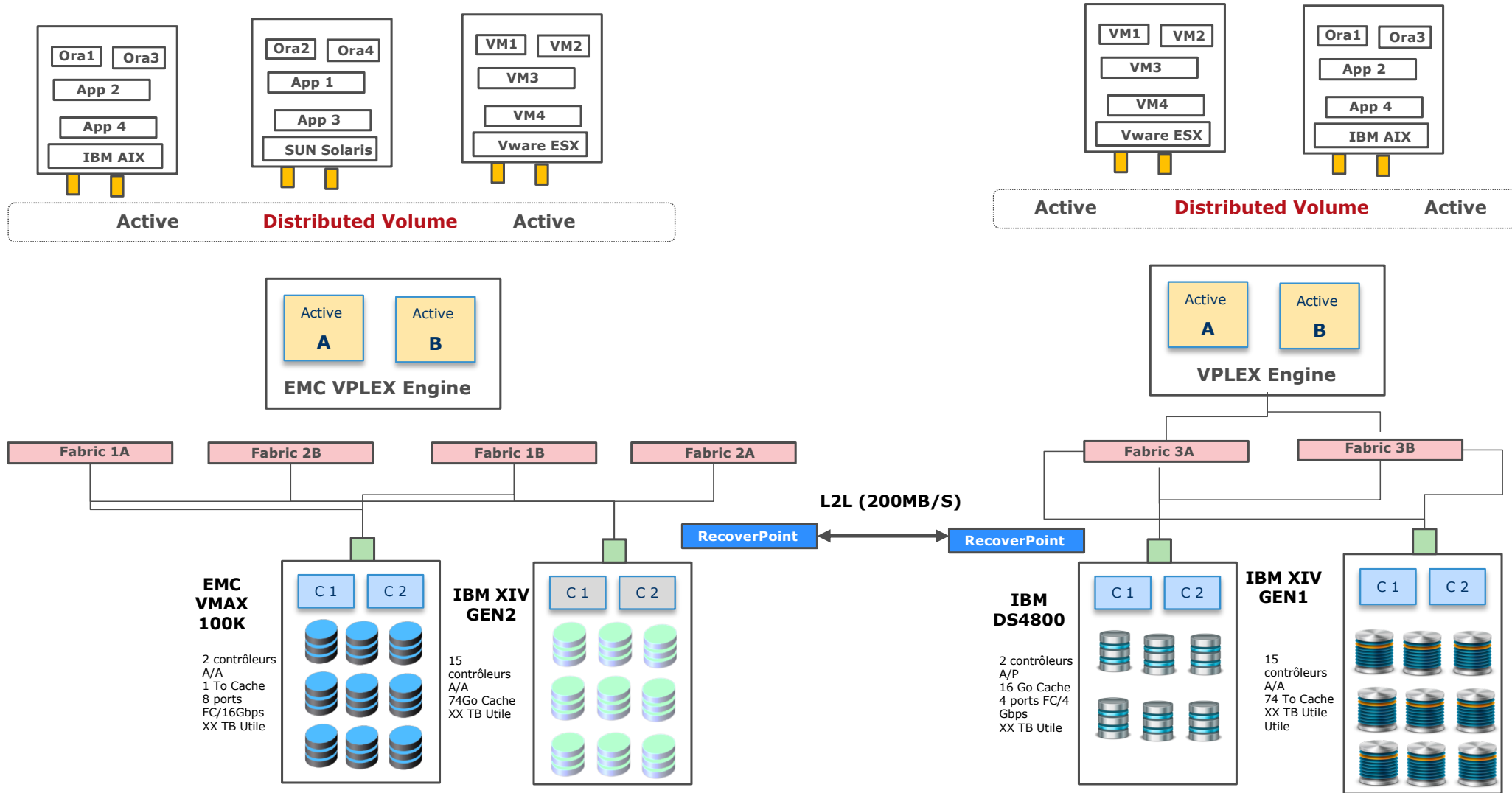
- The solution provides protection to applications in the face of disasters through automatic failover and failback between arrays and datacenters.
- The storage virtualization gives GCAM IT staff much more flexibility to move workloads between different tiers of storage including IBM DS4800, EMC VMAX 100K, and IBM XIV GEN1 and GEN2
- Flexible Deployment: Data migration was done with minimum downtime, saving countless weekends of maintenance downtime and IT resources.
- Enterprise Data Protection
- Data center Consolidation and Relocation
- Minimize network utilization with bandwidth compression and deduplication, significantly reducing replicated data over the network.

### Solution proposed by Power Maroc/Corporate Software

SLA	RPO	RTO	Dual site	Distance between datacenter	Links between datacenter
24h/24h and 7d/7d	Near Zero	Zero	Yes	110km	L2L (200Mbps)
<b>Hosts</b>	<b>OS</b>	<b>Databases</b>	<b>Applications/ERP</b>	<b>Storage</b>	<b>SAN</b>
IBM Power IBM xSeries <b>High Availability</b>	IBM AIX, Vmware, , Windows <b>Monitoring</b>	Oracle Database <b>Disaster Recovery</b>	In house and ERP application <b>Virtualization</b>	IBM XIV Gen1 EMC VMAX100 IBM DS48000 IBM XIV Gen2 <b>Replication</b>	IBM Brocade (4G/8G/16G) <b>Backup/Restore</b> IBM Spectrum /Tivoli Storage Manager IBM ProtectTier EMC DataDomain
IBM PowerHA SystemMirror + Vmware HA/SRM	Tivoli Monitoring Nagios	Yes	EMC VPLEX	EMC RecoverPoint	



 **PowerM Groupe Crédit Agricole Maroc -GCAM -EMC Continuous Availability Architecture**





## National Office of Electricity and Water (ONEE) Infrastructure and ERP consolidation : Business case

 المكتب الوطني للكهرباء والماء الصالح للشرب Office National de l'Electricité	
Industry	Electricity
Founded	1963
Headquarters	ONEE -Casablanca, Morocco
Area served	Morocco
Profile	The National Electricity Office (ONE) is the country's sole Moroccan electricity supply operator. A public establishment of an industrial and commercial nature created in 1963, it employs nearly 10,000 employees and has about 4 million subscribers. Among its mission is to satisfy the demand of electricity of Morocco with the best conditions of cost and quality of service
Consolidate Revenue ONEE	US\$ 3.25 Billion
Number of employees	20 000

**Business and service Partner: Power Maroc and Corporate Software**  
**Vendor : EMC**  
**Revenue : US\$ 3.5 Million**  
**Year : 2016-2015**

### Overview:

- Data Migration from HP Server and EVA4k/6k storage to DELL-EMC continuous availability architecture (based on DELL Chassis/ Vmware and VPLEX/Rpoint +VMAX100K)
- Dual site architecture (two Rooms) + Distance DR site
- Performance optimization for OLTP and Bach processing
- Consolidation of 80% of ONEE-BE IT Systems
- Short migration windows
- Virtualization of existing storage and heterogeneous SAN Fabric

**Business and service Partner: Power Maroc and Corporate Software**  
**Vendor : ORACLE**  
**Revenue : US\$ 4.5 Million**  
**Year : 2016-2017**

### Overview:

- Data Migration from HPUX and HP XP24K/EVA to Oracle Exadata
- Reduce batch processing time from 25 hours to 2 hours (contractual SLA)
- Performance optimization for OLTP and Bach processing
- Implementation of the disaster recovery plan (including BIA, process, DR strategy, business continuity and DR execution plan)
- Massively reduce ONEE CapEx and OpEx
- Delivering corporate data security and availability

 المكتب الوطني للكهرباء والماء الصالح للشرب Office National de l'Electricité et de l'Eau Potable	
Industry	Water and sanitation
Founded	1972
Headquarters	ONEE -Rabat, Morocco
Area served	Morocco
Profile	National Office of Electricity and Water (ONEE Water Branch) is a Moroccan public institution, with an industrial and commercial character and financial autonomy. The NEE Water Branch is a leading player in the water and sanitation sector in Morocco, responsible for the planning, production and distribution of the country's water resources

ONEE – Water Branch -- Solution proposed by Power Maroc/Corporate Software					
SLA	RPO	RTO	Dual site	Distance between datacenter	Links between datacenter
Business days	Near Zero	Zero	Yes	40 km	L2L (100 Mbps)
Hosts	OS	Databases	ns/ERP	Storage	SAN
DELL Chassis	Windows/ Vmware	Oracle SQLServer	SAP R/3	2 x EMC VMAX 100K(Hybrid) 150TB Site 1 + 1 x VNX 5000 - 200TB Site 2 EMC VLPEX and RecoverPoint	Brocade /EMC VPLEX
High Availability Monitoring SRM	Disaster Recovery	3th Site	Replication	Backup/Restore	
Microsoft Cluster Vmware HA and	Nagios	Yes	Yes	EMC VPLEX/RecoverPoint	Veritas Netbackup EMC DataDomain

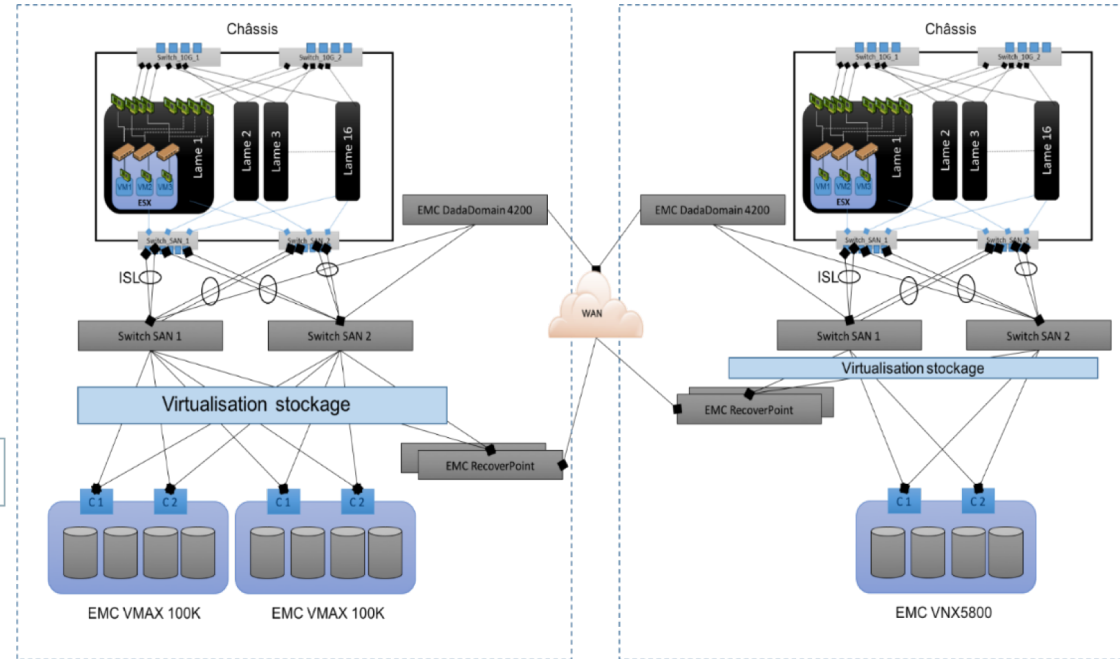
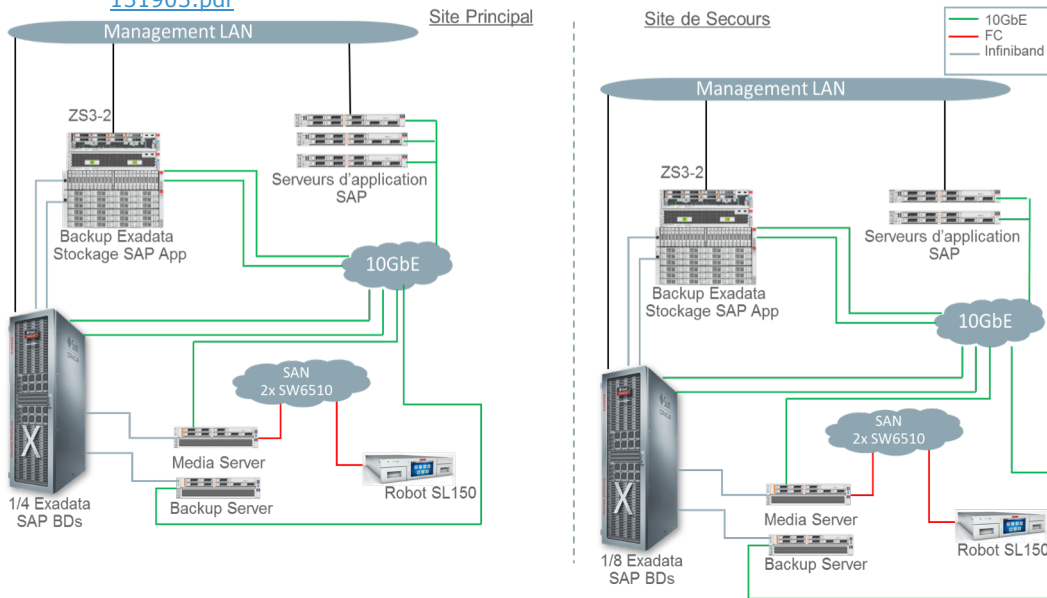
ONEE –Electricity Branch -- Solution proposed by Power Maroc/Corporate Software					
SLA	RPO	RTO	Dual site	Distance between datacenter	Links between datacenter
Business days	Near Zero	Zero	Yes	25 km	Dark Fiber(2 Gbps)
Hosts	OS	Databases	ns/ERP	Storage	SAN
Oracle SPARC Oracle Exadata	Oracle Linux	Oracle Exadata	SAP R/3	¼ Oracle Exadata Site 1 + Oracle Linux Server+ 1/8 Oracle Exadata Site 2 + Oracle Linux Server+	Brocade /EMC
High Availability Monitoring	Disaster Recovery	3th Site	Replication	Backup/Restore	
Oracle DataGuard	Oracle EM	Yes	No	Oracle DataGuard/Exadata	EMC Networker Oracle ZS3 Disk Appliance

## National Office of Electricity and Water (ONEE): Oracle Maximum Availability Architecture (MAA) + EMC Continuous Availability Architecture

### ONEE- Electricity Branch: Oracle Maximum Availability Architecture (MAA)

- 1/4 Exadata Machine for production
- 1/8 Exadata Machine for DR
- Oracle Server X5-2 for SAP Application Server
- Oracle VM and Oracle Linux
- Oracle Enterprise Manager
- Two (2) Backup Appliance Oracle ZFS Storage Appliance ZS3-2
- Two (2) Backup Server Oracle Server X5-2
- Two (2) Media Server Oracle Server X5-2L
- Two (2) LTO Library Oracle StorageTek SL150
- EMC Networker

<http://www.oracle.com/technetwork/database/features/availability/exadata-maa-131903.pdf>



### ONEE- Water Branch : EMC Continuous Availability Architecture

- Two (2) EMC High End VMAX 100K
- One (1) EMC Midrange VNX5800
- Four (4) Virtualisation Engine EMC VPLEX
- Eight EMC Continuous data protection RecoverPoint
- Four (4) Switches SAN Brocade B6520
- Four (4) DELL Blade
- VMware Enterprise Plus With Operations Management
- Two (2) VTL EMC DataDomain DD4200
- Veritas Netbackup

<https://www.emc.com/en-us/storage/vplex.htm>



# Maroc Telecom –IAM(2)- Databases and backup Consolidation : Business case

**Business and service Partner: Power Maroc and Corporate Software**  
**Vendor : IBM,ORACLE and DELL-EMC**  
**Revenue : US\$ 2.3 million**  
**Year : 2015-2016**

<b>Customer Profile</b>	
Traded as	EuroNext Paris : <b>IAM</b> MASI : <b>IAM</b>
Industry	Telecommunications
Stockholders	EAU Etisalat (53,09 %) Morocco State (30,00 %) Stock Exchange (16,82 %) Personnel (0,01 %) Auto-detention (0,08 %)
Headquarters	Maroc Telecom HQ Tour – Hay RIAD ,Rabat, Morocco
Area served	Morocco, Niger, Ivory Coast, Benin, Mauritanie, Mali, Burkina Faso, Gabon, Togo, Benin
Products	Land line phones, Mobile phone lines, Internet access, <a href="#">4G+</a>
Revenue	US\$ 3,5 billion
Net income	US\$ 559.8 million
Total assets	US\$ 12billion
Number of employees	11 807
Subsidiaries	Maroc Menara Maroc Casanet Mauritanie Mauritel Burkina Faso Onatel Gabon Gabon Télécom Mali Sotelma Bénin Bénin Télécoms Moov Togo Moov Bénin Moov Côte-d'Ivoire Moov Niger Moov Centrafrique Medi 1 TV

### Business Need:

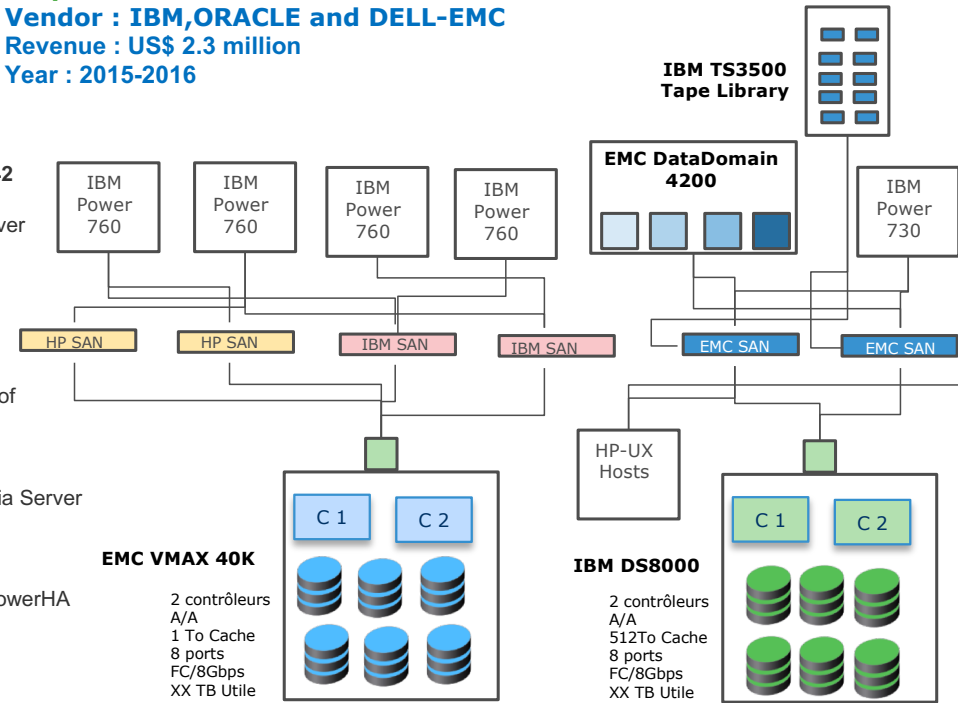
- Reduce complex administration task
- Reduce total cost of ownership (TCO)(Oracle License)
- Near Real-Time Data warehousing and Dashboard

### Challenge:

- Reduce Maroc Telecom Data warehouse backup windows **from 42 hours to 5 hours** without any database tuning
- Consolidate **9 Databases (mission critical)** into the Power7 server
- Integration into existing heterogeneous SAN (HP, IBM and EMC)
- Software upgrade (major version )(Veritas NetBackup)
- Short migration windows

### Overview:

- EMC DataDomain 4200 Backup Appliance: backup throughput of 10TB/h
- Veritas Netbackup Suite: 80 agents (OS, Databases,...)
- Tape Library IBM TS3500 (with 10 LTO drives and 500 Slots)
- Backup Server IBM Power 730 (hosting Veritas Netbackup Media Server and Catalogue)
- Integration with IBM DS8000
- Switch SAN EMC Connectrix DS6510
- 4 servers IBM Power 760 running Oracle Databases and IBM PowerHA SystemMirror
- Integration with EMC VMAX 40K
- Hardware Management Console HMC
- Oracle Database Enterprise Edition




### Solution proposed by Power Maroc

SLA	RPO	RTO	Dual site	Distance between datacenter	Links between datacenter
24h/24h and 7d/7d	Near Zero	Near Zero	No	Local Datacenter	Local Datacenter
<b>Hosts</b>	<b>OS</b>	<b>Databases</b>	<b>Applications/ERP</b>	<b>Storage</b>	<b>SAN</b>
IBM Power 7	AIX 7.1 PowerVM	Oracle Database	In house applications SOPRA	EMC VMAX40K IBM DS8000	Brocade (HP, IBM and EMC)
<b>High Availability</b>	<b>Monitoring</b>	<b>Disaster Recovery</b>	<b>Virtualization</b>	<b>Replication</b>	<b>Backup/Restore</b>
IBM PowerHA SystemMirror	Oracle Enterprise Manager	Yes	PowerVM	No	Veritas NetBackup



## PORTNET The National Single Window for Foreign Trade Procedures : Business case

<b>Customer Profile</b>	 الشباك الوطني الوحيد لتبسيط مساطر التجارة الخارجية Guichet Unique National des Procédures du Commerce Extérieur
Industry	Trade and services
Profile	<p>PortNet, the National Single Window for Foreign Trade Procedures, is a computer tool which enables the e-processing of authorizations, permits, certificates, customs documents and other deliveries by the competent organizations of the State, to undertake import and export operations. The safe developed system guarantees the technological and legal security of different documents upon the integration of a digital signature and e-payment.</p> <p>Therefore, PortNet allows economic operators, through a progressive integration of their supply chains and those of public and private service providers, to have a better control on complex import and export trade.</p>
Headquarters	Harbour building of Port of Casablanca, 2nd Floor Port of Casablanca, 20000, Casablanca, Morocco
Area served	Over 9 commercial ports in Morocco
Key Figures	<p>More than 19 200 integrated importers.          More than 24 000 integrated users.          More than 133 interconnected marine and shipping agents.          More than 20 interconnected key public and private bodies.          More than 760 integrated forwarding agents authorized by customs.          More than 315 681 monthly exchanged messages in 2015.          15 connected banks in Morocco.          More than 900 monthly registered stop-overs.</p>

### Business Need:

- Reducing human contact through the digitalization of all foreign trade procedures
- Traceability of all operations in real time
- Securing information and improving revenue
- Optimize application performance
- Implement Disaster Recovery Plan

### Challenge:

- Migration from existing SUN platform to Oracle SuperCluster
- Short migration windows
- Application code revue and optimization
- Reduce replicated data over the network.
- Performance optimization for OLTP and Batch processing

### Overview:

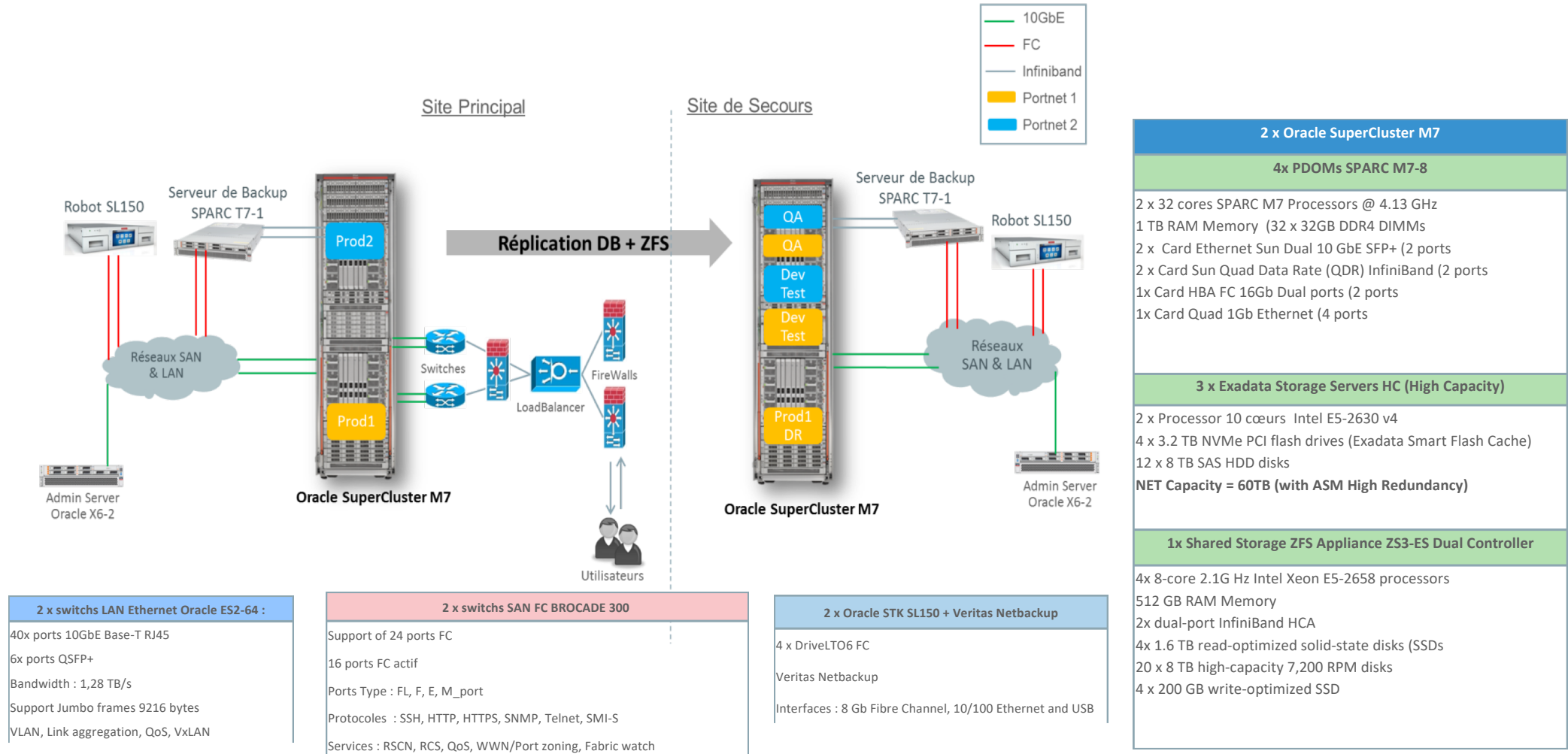
- Oracle SuperCluster M7 combines Oracle Database efficiency and performance with near-zero-overhead secure multitenancy tools to create a complete secure, infrastructure for database and applications. Elastic configurations allow to start with a small system and easily scale to cloud as demand grows over time.
- The Oracle M7 high-performance processor architecture delivers enterprise Java application and Oracle Database performance
- Oracle VM Server for SPARC and Oracle Solaris near-zero-overhead virtualization work in tandem with an ultra-fast InfiniBand fabric to allow for maximum performance and scalability with no wasted space, power, compute, memory, human, or software resources.
- Implementation of the disaster recovery plan
- Massively reduce Portnet CapEx and OpEx
- Delivering corporate data security and availability

**Business and service Partner: Corporate Software/Power Maroc**  
**Vendor : ORACLE**  
**Revenue : US\$ 2.5M\$**  
**Year : 2016-2017**

ONEE – Water Electricity -- Solution proposed Corporate Software					
SLA	RPO	RTO	Dual site	Distance between datacenter	Links between datacenter
Business days	Near Zero	Near Zero	Yes	90km	LAN to LAN (100MB/s)
<b>Hosts</b>	<b>OS</b>	<b>Databases</b>	<b>Applications/ERP Storage</b>	<b>Storage</b>	<b>SAN</b>
Oracle Linux	Oracle Linux	Oracle Exadata	In house application	Oracle Exadata and SuperCluster Storage	SAN Brocade
Oracle Exadata		SuperCluster			
<b>High Availability</b>	<b>Monitoring</b>	<b>Disaster Recovery</b>	<b>3th Site</b>	<b>Replication</b>	<b>Backup/Restore</b>
Oracle DataGuard	Oracle EM	Yes	No	Oracle DataGuard/Exadata	Veritas NetBackup Oracle ZS3 Disk Appliance



# PORTNET: Oracle Maximum Availability Architecture (MAA)





# Maroc Telecom –IAM(3)- Storage Virtualisation : Business case

<b>Customer Profile</b>	
Traded as	EuroNext Paris : <b>IAM</b> MASI : <b>IAM</b>
Industry	Telecommunications
Stockholders	EAU Etisalat (53,09 %) Morocco State (30,00 %) Stock Exchange (16,82 %) Personnel (0,01 %) Auto-detention (0,08 %)
Headquarters	Maroc Telecom HQ Tour – Hay RIAD ,Rabat, Morocco
Area served	Morocco, Niger, Ivory Coast, Benin, Mauritanie, Mali, Burkina Faso, Gabon, Togo, Benin
Products	Land line phones, Mobile phone lines, Internet access, <a href="#">4G+</a>
Revenue	US\$ 3,5 billion
Net income	US\$ 559.8 million
Total assets	US\$ 12billion
Number of employees	11 807
Subsidiaries	Maroc Menara Maroc Casanet Mauritanie Mauritel Burkina Faso Onatel Gabon Gabon Télécom Mali Sotelma Bénin Bénin Télécoms Moov Togo Moov Bénin Moov Côte-d'Ivoire Moov Niger Moov Centrafrique Medi 1 TV

## Business Need:

- Enhance RPO and RTO
- Compliance with Maroc Telecom Disaster Recovery Plan
- Reduce complex administration task
- Reduce total cost of ownership (TCO)
- Homogenous virtualization and replication for all high end storage

**Business and service Partner: Power Maroc**  
**Vendor : DELL-EMC**  
**Revenue : US\$ 700k\$**  
**Year : 2015-2017**

## Challenge:

- Virtualization of 1PB of data across heterogeneous storage system (IBM, EMC, HP and Hitachi)
- Short migration windows
- Flexible RPO and RTO per application / storage subsystem
- Continuous data protection with multiple recovery points to restore applications instantly to a specific point in time
- Minimize network utilization
- Reduce replicated data over the network.

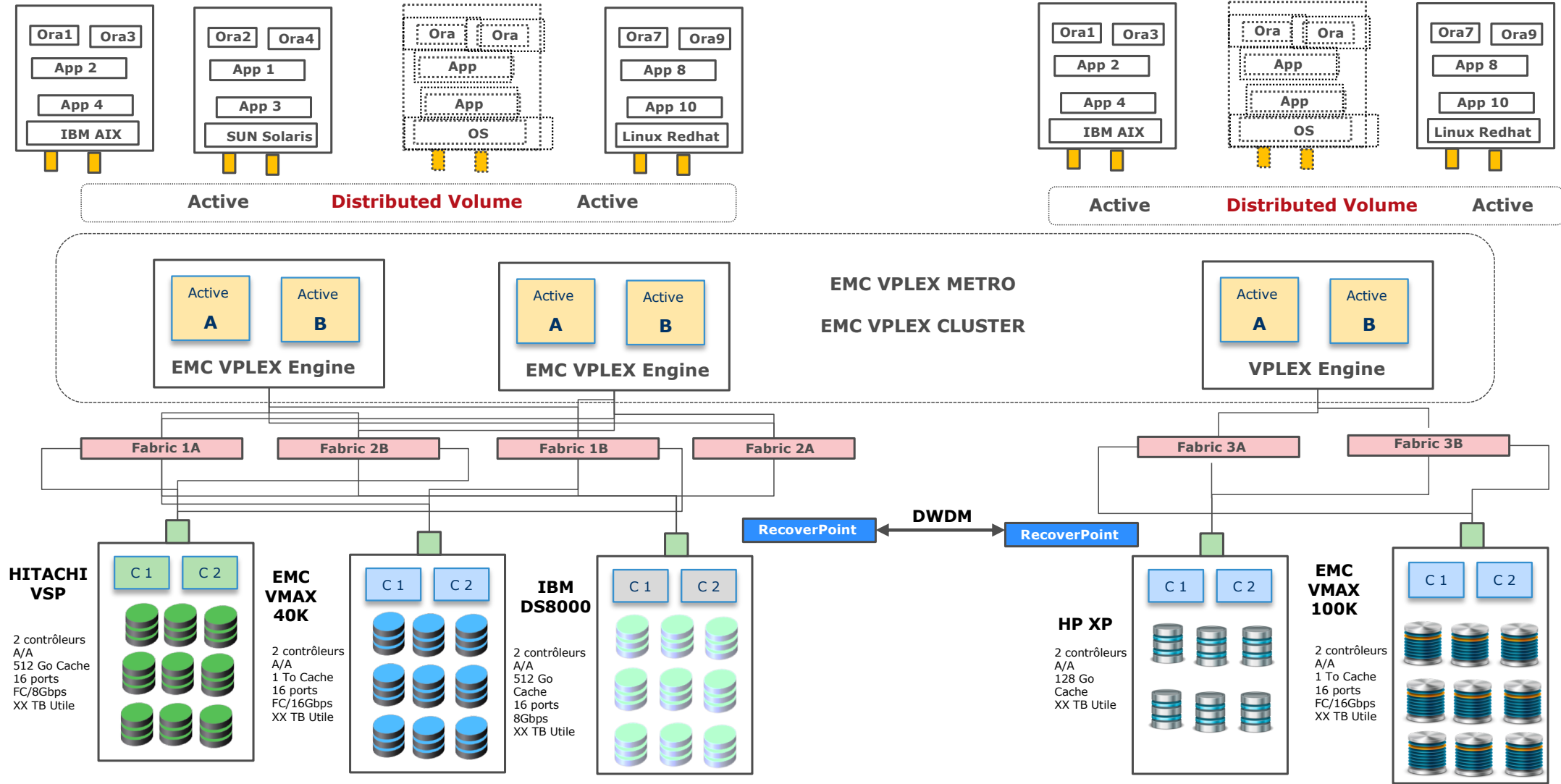
## Overview:

- The solution provides protection to applications in the face of disasters through automatic failover and failback between arrays and datacenters.
- The storage virtualization gives Maroc Telecom IT staff much more flexibility to move workloads between different tiers of storage including IBM DS8000, EMC VMAX 400K, Hitachi HDS, HP EVA/XP
- Flexible Deployment: Data migration was done with minimum downtime, saving countless weekends of maintenance downtime and IT resources.
- Enterprise Data Protection
- Data center Consolidation and Relocation
- Minimize network utilization with bandwidth compression and deduplication, significantly reducing replicated data over the network.

Solution proposed by Power Maroc					
SLA	RPO	RTO	Dual site	Distance between datacenter	Links between datacenter
24h/24h and 7d/7d	Near Zero	Zero	Yes	40 km	DWDW (4 to 8 Gbps)
Hosts	OS	Databases	Applications/ERP	Storage	SAN
IBM Power Oracle SUN HP and DELL Blades	AIX,Solaris,Vmware, Linux, Windows	Oracle Database	In house and ERP application	IBM DS8000 EMC VMAX400 Hitachi HDS HP XP and EVA	IBM Brocade
High Availability	Monitoring	Disaster Recovery	Virtualization	Replication	Backup/Restore
IBM PowerHA SystemMirror + Veritas Cluster Vmware HA/SRM	HP SiteScope	Yes	EMC VPLEX	EMC RecoverPoint	Veritas NetBackup



# Maroc Telecom : EMC Continuous Availability Architecture



# Maroc Telecom –IAM(4)- Managed Services: Business case

<b>Customer Profile</b>	
Traded as	EuroNext Paris : <b>IAM</b> MASI : <b>IAM</b>
Industry	Telecommunications
Stockholders	EAU Etisalat (53,09 %) Morocco State (30,00 %) Stock Exchange (16,82 %) Personnel (0,01 %) Auto-detention (0,08 %)
Headquarters	Maroc Telecom HQ Tour – Hay RIAD ,Rabat, Morocco
Area served	Morocco, Niger, Ivory Coast, Benin, Mauritanie, Mali, Burkina Faso, Gabon, Togo, Benin
Products	Land line phones, Mobile phone lines, Internet access, <a href="#">4G+</a>
Revenue	US\$ 3,5 billion
Net income	US\$ 559.8 million
Total assets	US\$ 12billion
Number of employees	11 807
Subsidiaries	Maroc Menara Maroc Casanet Mauritanie Mauritel Burkina Faso Onatel Gabon Gabon Télécom Mali Sotelma Bénin Bénin Télécoms Moov Togo Moov Bénin Moov Côte-d'Ivoire Moov Niger Moov Centrafrique Medi 1 TV

## Business Need:

- Improved security
- Proactive approach to IT problems
- Better uptime
- Cost savings over in-house IT
- Free internal staff for strategic work
- Lack of internal IT
- Reduce CAPEX/OPEX

## Solution:

- Consortium provide Management, Monitoring and Reporting services of the existing and new components on site and remotely to Maroc Telecom through the highly skilled PowerM and CS Teams with SLAs for Incidents and problems
- Managed Services for around 300 servers and 20 storage sub systems 24/24 and 7d/7d
- A dedicated team of 11 consultants on site and 5 consultants off site (remote)
- Use of existing HP Site Scope for monitoring and service desk
- IT as a services for server platform support , backup and recovery management, storage management and hypervisors management
- KPI(s) for one Quarter (average): 800 services requests /tickets (including support, change request, incident, problem,...)/97% backup succes/

**Business and service Partner: Power Maroc and Corporate Software**

**Vendor : DELL-EMC,Fujitsu, Oracle SUN,Brocade,FalconStor,Quantum,Alteon,Equal Logic,CISCO**

**Revenue : US\$ 9M\$ (3 million \$ per year)**

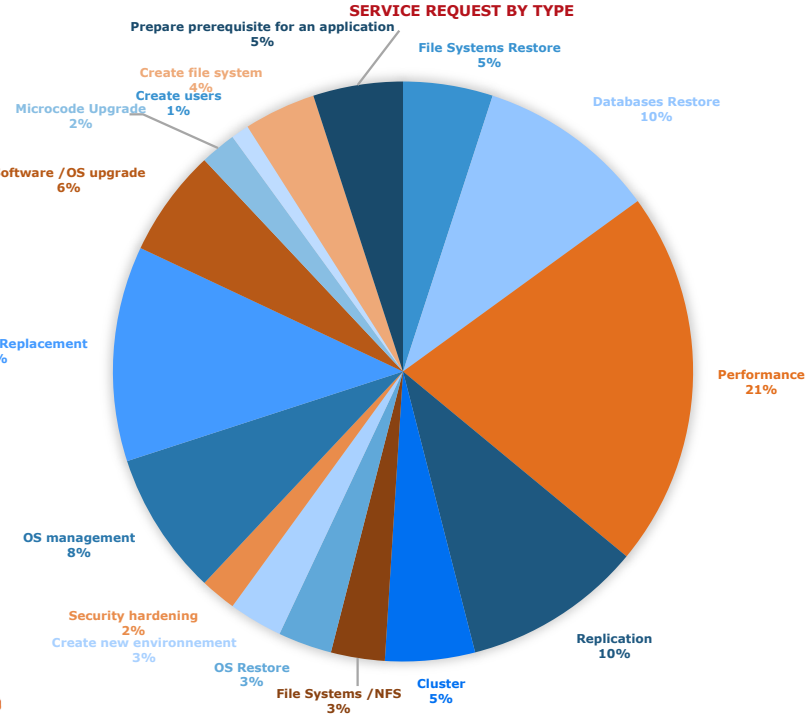
**Year : 2016-2018 Contract number 20510088195.16.SI and PR535474/CCI/SI)**

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- Switch Brocade DXC 240
  - Librairie SUN SL8500
  - Brocade 5300
  - SUN T5240 Servers
  - Licences Veritas NetBackup
  - SPARC T5440 Servers
  - SPARC T5220 Servers
  - SPARC M4000 Servers
  - SPARC M9000 Servers
  - SPARC M5000 Servers
  - SUN V490 Servers
  - Firewall CISCO ASA Servers
  - Load Balancer CISCO Servers
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- Quantum scalar i500 avec 6 lecteurs LTO4
  - Baie de stockage EMC CX3-40
  - Switchs Brocade DS-4100B
  - 43 Serveurs Fujitsu RX
  - Load Balancer Alteon ACEdir 4 with AC Pwr-8 10/100T
  - Quantum scalar 100 avec 4 lecteurs LTO3
  - Blade and lames DELLPower Edge
  - 09 Blade Servers Blade BX620
  - 90 serveurs Fujitsu Siemens Lame Blade BX620
  - Serveurs Dell R710
  - DELL PE M1000e Blade Enclosure
  - Power Connect M6348 Switch,
  - PowerConnect M8024-k 10GbE Switch
  - PowerEdge M910 Blade Server,
  - Equal Logic PS 6110 Baie de Stockage
  - Rack 42U including 1U KMM and PowerEdge KVM
  - DELL 1 Power Edge M820 Blade Server
  - 96 Serveurs DELL M710
  - 2 x VTL FlaconStor
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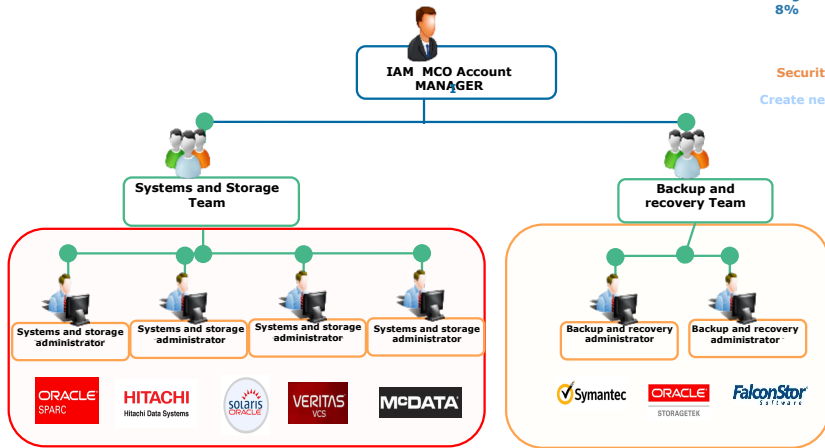
# Maroc Telecom – Managed Services: Business case

Backup TB per Day	50 TB
Backup windows for application type 1	2 hours
Backup windows for application type 2	4 hours
Backup windows for application type 3	8 hours
Backup windows for application type 4	Weekend
Number of Oracle Database to backup	28
Microsoft Exchange backup	Yes
SharePoint backup	Yes
Application server backup	Yes
File Systems backup	Yes
Vmware backup	Yes



Manage Virtual environment	X
High Availability	X
System Console Management	X
Manage Operating System / File Systems	X
Manage Operating System and Security	X
Support Performance and Capacity Reporting	X
Advanced Management- Backup and Recovery Management	X
Monitoring- Storage Management	X
Base Management- Storage Management	X
Virtual Environment/Hypervisor Management	X

## Managed Service on site resources Site AI Irfane - Rabat



## Managed Service on site resources 5 other Sites - Rabat

