Managed Private Cloud Single Tenant (MPC ST) –Service Description
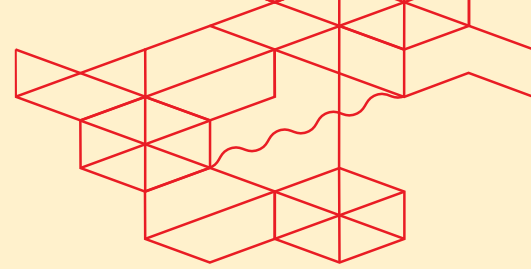
Version 1.1, January 2024

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Managed Private Cloud

Managed Private Cloud (MPC) is an Infrastructure as a Service (IaaS) platform delivered by Equinix Managed Solutions (EMS).

MPC allows customers to purchase computing resources hosted in an Equinix IBX to enable multi- and hybrid cloud solutions. Using Equinix Fabric, MPC integrate MPC with the customer's environment (on-premises, colocation) and other cloud- and SaaS service providers such as AWS, Azure, Google Cloud, Oracle Cloud, Salesforce, SAP and more.

MPC includes compute, storage and networking resources, managed through the MPC Operational Console. In this portal the customer can create and manage virtual machines with compute and storage resources, as well as configure virtual networks and security policies.

MPC is available in selected IBXs globally, providing geographic advantages for the customer's applications and systems.
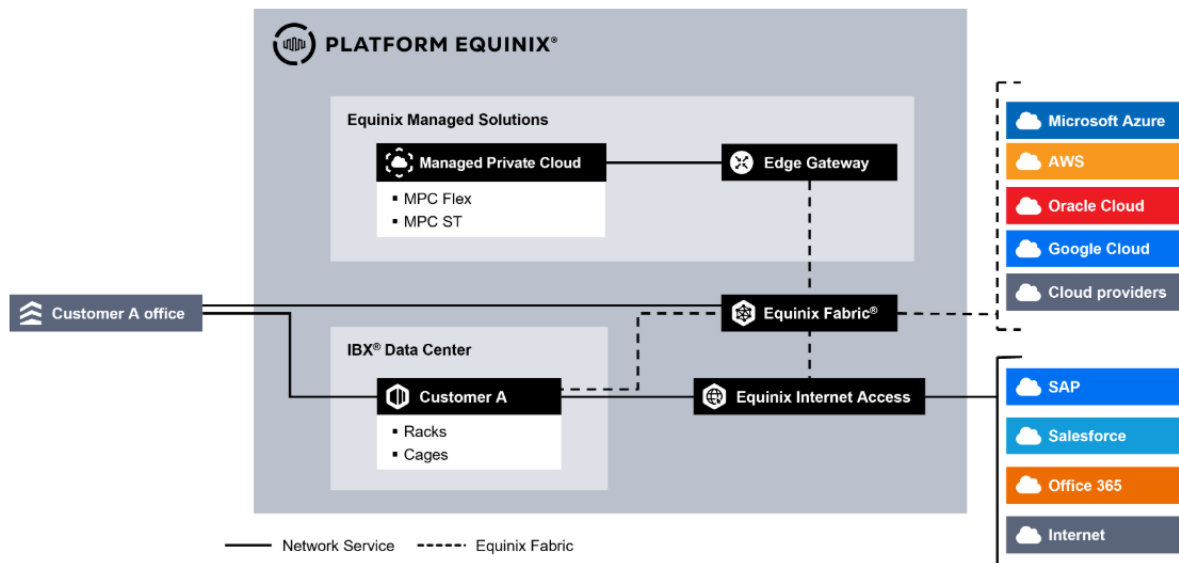
MPC is available in 3 service variants: Multi-Tenant and Single Tenant. Single Tenant is available in two types of resource management.

MPC VARIANT	RESOURCE UNITS	RESOURCE MANAGEMENT / PORTAL
FLEX (MULTI-TENANT)	vCPU and GBvRAM	VMware Cloud Director
ST (SINGLE-TENANT)	Host	VMware Cloud Director
CORE (SINGLE-TENANT)	Host	VMware vCenter

This Service description covers MPC ST (Single Tenant).

MPC Single Tenant (ST)

MPC ST is a single-tenant compute environment that deploys as a cluster with a number of hosts. MPC ST provides the customer a dedicated infrastructure with compute, storage and network resources that can be managed from the MPC Operational Console.

MPC ST Compute Cluster

Cluster

The MPC ST cluster includes four or more hosts of the same type. The cluster type defines the availability and SLA characteristics of the service. Supported cluster types are:

- Single cluster, single datacenter
- Multi cluster, multi datacenter

We recommend a single cluster, single datacenter for applications that demand high availability. Disaster recovery for this cluster type is primarily realized by a backup solution.

We recommend the multi cluster, multi data center type if the application itself supports fail-over mechanisms and can recover in case of a failure.

An MPC ST environment includes a cluster configuration of at least four (4) hosts in which three (3) hosts are for use and one is a spare (N + 1 principle).

Host

MPC ST offers two Host types, both of which include VMWare Licenses.

HOST TYPE[1]	USE CASE	# AVAILABLE GB RAM[2]	# AVAILABLE CPU Cores[1]	VMware
GHM_32L05_V	Generic Host	460	30 (≥ 2.2 GHz)	Included
GHM_32L10_V	Generic Host High Memory	950	30 (≥ 2.2 GHz)	Included

1. *Availability of the Host type may very per Metro.*

2. *Availability of the Host type may very per Metro Net capacity per host.*

Cluster Sizing

You should base the sizing of the cluster on the required compute capacity and availability. A cluster consists of net consumable capacity in number of hosts (N) and deploys spare capacity for availability, recovery and maintenance. The spare capacity needed depends on the cluster size.

- Minimal Cluster size is 4 Hosts (N+1).
- Cluster sizes above 15 hosts need a second spare host (N+2).

Cluster Sizes and Net Capacity

We dedicated the capacity of the spare server(s) to ensure availability. Spare nodes can't be utilized while all active nodes remain operational, therefore the capacity they provide is not included in the calculated available capacity. The overview below shows examples of cluster sizes, including the minimum and maximum sizes, and the associated usable net capacity in numbers of usable CPU Cores and GB RAM.

MPC ST CLUSTER SIZE	HYPERVISOR SERVER MODEL	# SPARE SERVERS	# AVAILABLE CPU CORES	# AVAILABLE GB RAM
4 (3+1) minimum	GHM_32L05_V	1	90	1380
	GHM_32L10_V	1	90	2850
15 (14+1)	GHM_32L05_V	1	420	6440
	GHM_32L10_V	1	420	13300
17 (15+2)	GHM_32L05_V	2	450	6900
	GHM_32L10_V	2	450	14250

Organizational Virtual Data Centers (OVDC)
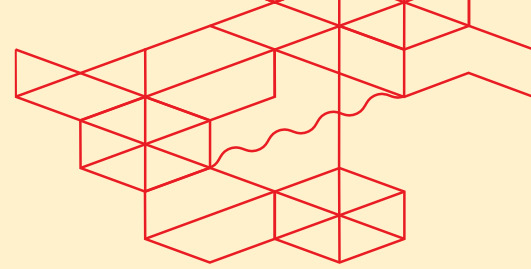
You can define one or more OVDCs in an MPC ST environment, offering flexibility, scalability and control. An OVDC provides compute resources, vCPU and GB RAM, and storage resources on which customers can create Virtual Machines.

Customers can combine multiple OVDCs in different variants and sizes for different purposes. They can configure security policies on the virtual networks and interconnect the OVDCs.
For more information about OVDCs see Virtual Data Center.

VMware Licensing
MPC ST Clusters include VMware licensing.

Compute Purchase Units
MPC ST purchase units are the available host types.

The different kind of purchase units for MPC Single Tenant are described in the table below.

PURCHASE UNIT	HOST TYPE	BILLING TYPE	DESCRIPTION
MPC ST Compute GHM_32L05_V	Generic Host	Baseline	Agreed number of hosts in the cluster
MPC ST Compute GHM_32L10_V	Generic Host High Memory	Baseline	Agreed number of hosts in the cluster

Note: The cluster hosts are committed for the full contracting period.

Using MPC ST
- You can choose multiple hosts and clusters that match the resource request.
- Multiple guarantees of vCPU can be mixed in one MPC Single Tenant Cluster by adding an extra Virtual Data Center (VDC).
- MPC Single Tenant has, within the limits of the host, no maximum size of a VM for the use of compute resources. There are recommendations for the best performance of a VM. Adding more compute resources to a VM above the recommended size does not always lead to performance improvements.
- For MPC SINGLE TENANT, the maximum recommended VM size is 8 vCPU and 64 GB vRAM.

MPC Storage

MPC Storage is available in two performance tiers and is linked to the cluster. You can divide and distribute the total capacity between different OVDCs.

For the Virtual Machine (VM), you can create a virtual disk within the customer assigned storage capacity on the storage policy (performance level) that matches the VM's workload.
The table below depicts an overview of the storage policies.

STORAGE POLICY	USE
HIGH PERFORMANCE	Database (& Logs), RDS/SBC, VDI Low latency beneficial workloads
PERFORMANCE (DEFAULT)	Generic VMs, App / Web services, High performance File services / Object storage

Features of MPC Storage
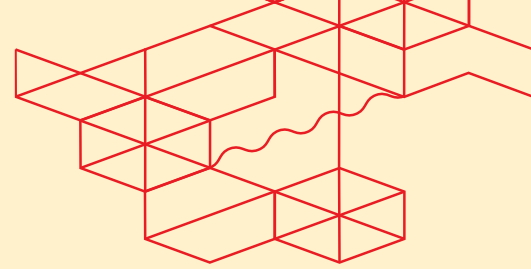The following features apply to the use of storage policies within the MPC environment:
- We allocate storage capacity per policy per OVDC
- The MPC Storage features encrypted at Rest

MPC Storage per VM
- The recommended virtual disk size per VM is between 40 GB and 8 TB.

MPC Storage Purchase Units
You consume MPC Storage in purchase units (PUs) of 1 TB per Storage Policy with Baseline and Overage charges (Calculation Types).

Baseline is the committed volume of Storage with a fixed monthly recurring charge. We base the volume of storage on the cluster size, each host including the spare host has a minimum Baseline value of 5TB.

Overage is the additional consumed volume above Baseline, metered and calculated monthly. We offer an MPC ST cluster with a minimal commit (Baseline) on MPC Storage. The storage volume cannot exceed the storage capacity in the host. If more storage is required ten provided by the number of hosts the Managed Private Storage service can provide this.

| PURCHASE-UNIT	TIER	CALCULATION TYPE	UOM	DESCRIPTION
MPC Storage	• High Performance	Baseline	1 TB	Baseline charge for the committed storage quantity in whole TBs Minimum Baseline is 5TB per host, including spare host
	• Performance	Overage	1 TB	Charge for the usage of storage that exceeds the Baseline quantity in TB with 3 decimals. The volume is calculated by taking the weighted monthly[2] average of the daily maximum usage.

Note: Storage capacity is calculated based on the following assumptions: 1TB = 1024GB

1. *Storage capacity is not transferable to other OVDCs.*

2. *Monthly means for the last day of the previous month until the last day of the billing month.*

Consuming Storage Overage
We provision MPC Storage per Storage Policy with additional capacity available for flexible consumption.
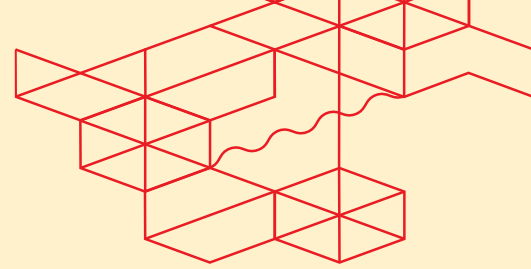
The size of this additional available capacity is calculated as a percentage of the Baseline volume with a maximum of 25% or 10TB.
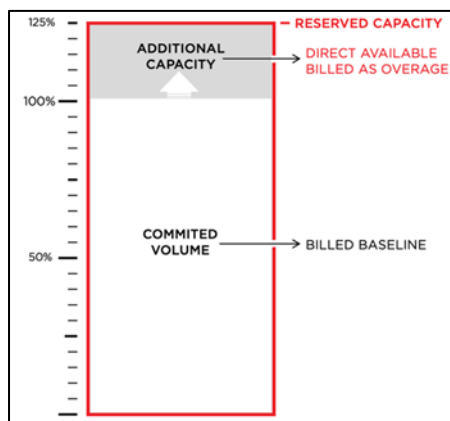
MPC Storage consumption
The storage consumption per policy is measured as allocated capacity for:

- VM Disks
- VM-swap files
- Snapshots
- File in a Library (vApp templates and ISOs)

MPC Connectivity

External Connectivity

To make MPC an integral part of customers (multi) cloud architecture, it can be easily connected to the following :

1. Equinix Colocation
2. Equinix Network Edge
3. WAN Providers
4. Cloud Service Providers (CSP)
5. MPC environment in another Metro
6. Equinix Internet Access (EIA) via Equinix Fabric

Connectivity is offered in combination with Equinix Fabric (Virtual Circuits) only, other connectivity into MPC is not supported. See <u><link></u> for details on Connections.

Connectivity Type
The network requirements determine the way customer network is connected to an MPC Organizational Virtual Datacenter (OVDC).The following connectivity types are available:

- Connectivity Routed   routing by Equinix
- Connectivity Customer Routed   routing by Customer
- Managed Private Firewall (MPF)   routing by Equinix

Multiple OVDCs
Each OVDC has it's unique connectivity type, when multiple OVDC's are used combinations of connectivity types are possible, see <u><link></u> for supported combinations.

Connectivity Types

Connectivity Routed
This Connectivity Type offers layer-3 connectivity to the MPC OVDC for connectivity.

This option provides the customer with a ready for use and built-in routing engine. Configurable via the operational console. Each MPC internal (routed) network created is automatically part of the customer routing domain.
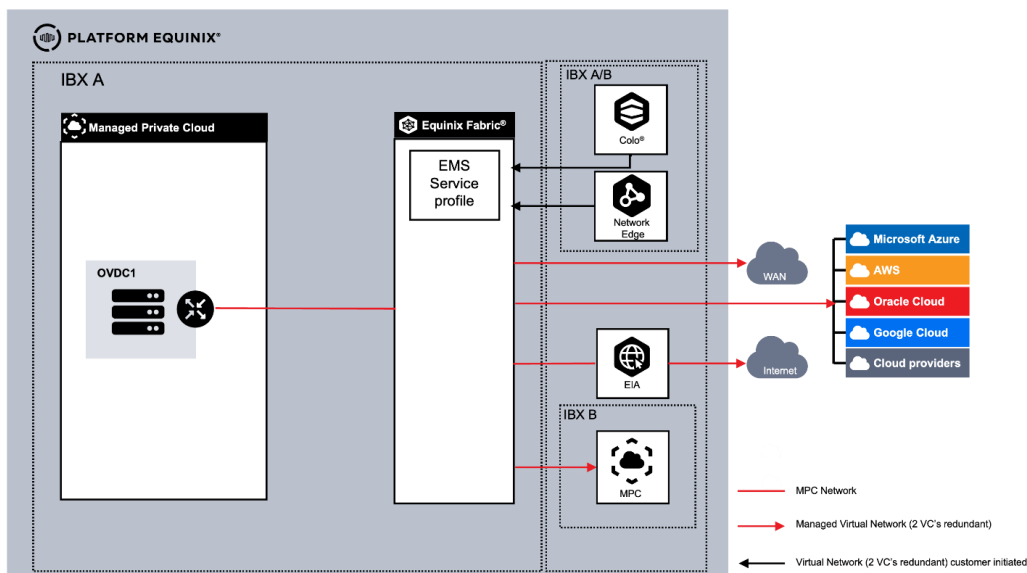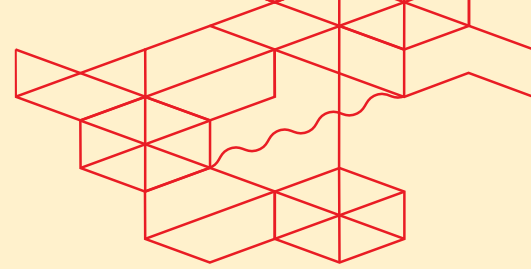

Figure 1 Overview Connectivity Routed

Connectivity Customer Routed
This option provides the customer with a self-provided, installed and managed virtual routing appliance (VM) within MPC as routing engine. All ordered external networks will be made available in the Operational Console as an external network

by Equinix. Additional external networks can be ordered separately. External networks must be connected to the virtual routing appliance.

MPC internal (isolated) networks created must be connected to the routing appliance.

> *Note1 – Within this option no routed internal networks are available. Only isolated internal networks in self-service are used to connect customer VMs to the virtual routing appliance.*
> *Note2 – External networks must be used to connect the virtual routing appliance for external connectivity (2 VCs per connection).*
> *Note3 – Although the MPC platform has a high availability, we recommend to have an HA setup and use 2 VMs as a customer virtual routing appliance(s).*
> *Note4 – We highly recommend to use vmtools on any appliance/VM to support graceful management.*
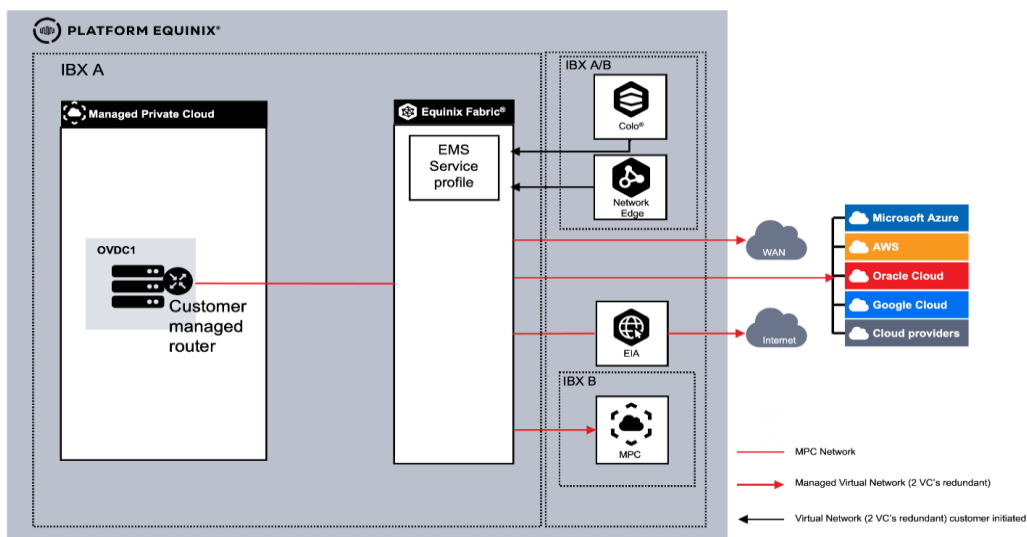
Connectivity Managed Private Firewall
When using the Managed Private Firewall (MPF), as an additional service for extra security including routing and logging. All external connectivity is terminated at MPF. MPF is connected to the built-in MPC routing.
In this combination of MPF and MPC routing north-south traffic is processed first by MPF and further MPC, also MPC provides east-west routing.

This option provides the customer with a high secure ready for use and built-in routing engine consisting of 2 elements.

- MPF routing which is configured by Equinix
- MPC routing configurable via the operator console

Each MPC internal routed network created is automatically part of the customer routing domain. Internal isolated networks are not. For more information on internal networking see below <link>
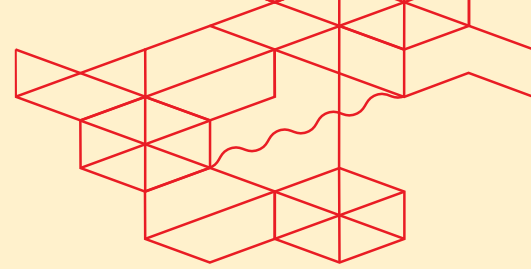
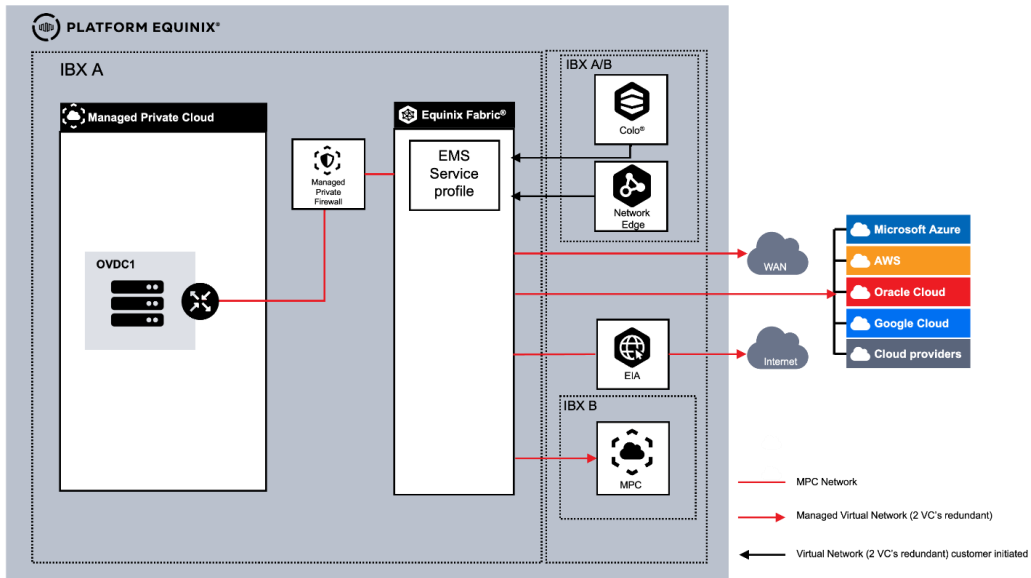*Figure 3 Overview Connectivity Managed Firewall*

Networking with Multiple OVDC's
When using multiple OVDC's in a Metro, customers can use different Connectivity type combinations. As a Connectivity Type is related to the OVDC. Each scenario comes with different capabilities.

Multiple OVDC's with Connectivity Routed
When using multiple OVDC's in one Metro customer can choose to use a dedicated Gateway per OVDC (Figure 1) or use the same Gateway instance for both OVDC's (Routed Joined) (Figure 2). When a network needs to be available in multiple OVDC's and you use the connectivity option Customer Routed, you can use the External Network functionality to make external networks available in both OVDC's by using a Datacenter group.
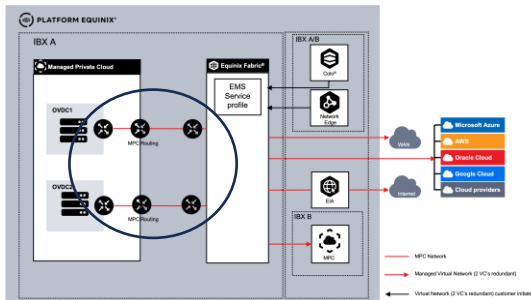
Figure 1 Dedicated Routing per OVDC   *Figure 2 OVDC's with Joined Routing*
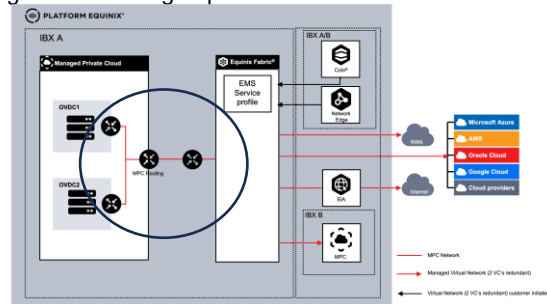
Multiple OVDC's with Connectivity Routed and Customer routed
When using multiple OVDC's in one Metro customer can choose to use a combination of Routed for one OVDC and Customer Routed for the other. Customer will have two options for implementation
   1. The OVDC's with connected OVDC's
   2. The OVDC's are not connected

In the case of scenario 1 there will be a VLAN between the Customer Routed and the Routed Gateway.
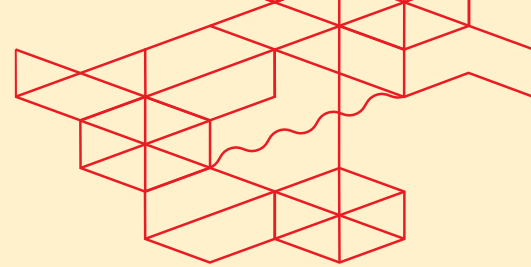
Figure 1 Connectivity Routed and Customer routed with shared network

In this scenario customer can create networks between the 2 different OVDC's.

In Scenario 2 where there is no connectivity between the two OVDC's the OVDC's work as a stand-alone environment.

Connections

The following connections are possible.

VIRTUAL CONNECTION OPTIONS

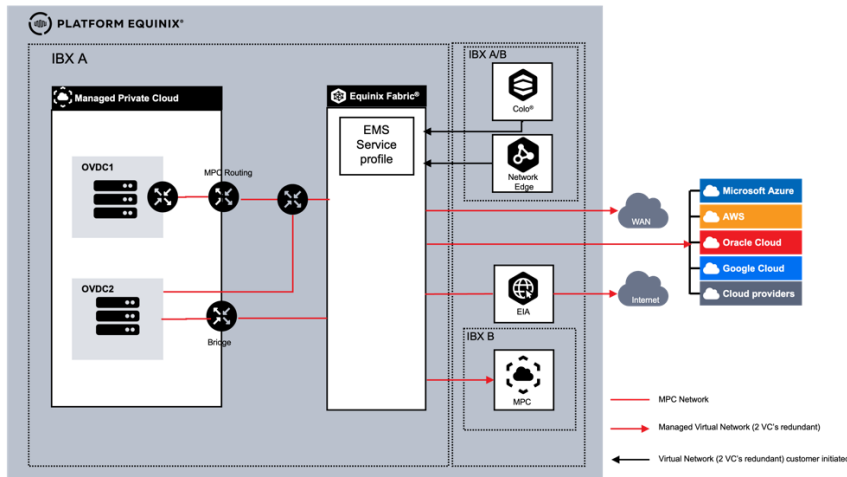| CONNECTION	#	TYPE	DESCRIPTION
Equinix Colocation	1	Self-Service VC	Customer created and managed connection. Via Equinix Fabric Portal. Using an EMS Service Profile / Service token.
Equinix Network Edge	2	Self-Service VC	Customer created and managed connection. Via Equinix Fabric Portal. Using an EMS Service Profile / Service token.
WAN Providers	3	Managed VC	Equinix created and Managed connection. Part of the MPC order
Cloud Service Providers (CSP)	4	Managed VC	Equinix created and Managed connection. Part of the MPC order
MPC environment in another Metro	5	Managed VC	Equinix created and Managed connection. Part of the MPC order
Equinix Internet Access (EIA) via Equinix Fabric	6	Managed Internet Access	Equinix created and Managed connection. Part of the MPC order

Self-Service VC
With a self-service VC customers initiates VCs via the Equinix Fabric portal. Equinix Managed Solutions will contact you to configure the connection on MPC side. Each connection requires a pair of VCs to be ordered.

Managed VC
With a managed VC, the VC is part of an MPC order where Equinix initiates the VC configuration. During fulfillment Equinix will contact you for the parameters to configure the VCs.

Note: Every connection needs two (2) Virtual Circuits for redundancy reasons. Both for Self-Service & Managed VC.

Internet Access

If customer requires Internet as part of the MPC environment, Managed Internet Access needs to be ordered, Managed Internet Access makes use of Fabric Internet Access (EIA), it is configured with Fixed Bandwidth and no bursting options. EIA supports up to 10 Gbps bandwidth to MPC, IP-spaces need to be ordered as a separate item. For Internet access customer can also choose to contract a third-party solution with availability on Equinix Fabric. In this case customer need to contract the Internet service yourself.

Note: For third-party internet provider, customer need to order two connections for redundancy reasons.

MPC Virtual Networking

The MPC platform offers various virtual network functionalities that a customer can configure in the MPC Operational Console, the table below shows the list of functions and if the functions are part of the service or separate charged.

FUNCTION	CHARGE TYPE	ROUTED AND MANAGED FIREWALL	CUSTOMER ROUTED
STANDARD FIREWALL	Included	Y	N
DISTRIBUTED OR ADVANCED FIREWALL	Charged	Y	Y
ROUTING, IPV4 STATIC AND DYNAMIC (BGP)	Included	Y	N
ROUTING IPV6	Included	Y	N
NAT	Included	Y	N
DHCP	Included	Y	N
VPN (LAYER-2)	Included	Y	N
VPN IPSEC LAYER-3 SITE TO SITE	Included	Y	N
ROUTE ADVERTISEMENT	Included	Y	N

Internal Networks
You can create internal networks for an OVDC via self-service in the MPC Operational Console. The MPC Networking service offers a maximum of 1000 internal networks per OVDC. Internal networks can also be configured over multiple OVDCs within the same Equinix IBX when the OVDC is configured with a datacenter group.

Within Internal Networks 2 types can be distinguished:
- Routed, this allows VMs to be connected to a network that uses the Edge Gateway as the router and give access to the WAN, Colocation, CSP's or Internet and is available to all VMs and vApps within the OVDC.
- Isolated, these networks are known as isolated as they aren't connected to a network that has access to WAN, Colocation, CSP's or Internet, unless you attach it to a self-managed router in the connectivity option "Customer Routed".

Routed networks are only available for Connectivity Type "Routed".

Inter Site Networks
MPC comes in multiple Datacenters; you can connect 2 MPC sites in different datacenters by requesting a Managed Virtual Circuit between the 2 sites. Based on the Connectivity Type the network will be configured. The connectivity between 2 datacenters will be charges as Managed Virtual Circuit, see 1.1.4 and further for details about the Connectivity Types and Managed Virtual Circuits.

Connectivity between more than 2 datacenters is supported but requires a Fabric Cloud Router (FCR), Equinix Fabric IPWAN and 2 Virtual Connections from the MPC Zone and the Fabric Cloud router.

Note: Ordering and configuring Fabric Cloud Router and IPWAN, is outside the Managed Solutions scope.

Purchase Units Connectivity
Units per Single OVDC:

| PURCHASE ITEM	UOM	CALCULATION TYPE	DESCRIPTION
Connectivity Type	ONCE	Baseline	Routing instance per OVDC • Routed • Customer Routed • Managed Firewall • Joined Routing
Managed Virtual Circuit	VC	Baseline	Available bandwidth 10/ 50/ 200/ 500/ Mbps or 1,2,5,10 Gbps Two (2) VC's needed per connection for redundancy
Managed Internet Access	Each	Baseline	Internet Access is available in 10/50/100/200/500/Mbps and 1,2,5 and 10Gbps **Managed Virtual Circuits are included in Managed Internet Access!**
Allocated IP-space	block	Baseline	Supported IPv4 /24 to / 29 and IPv6
Distributed Firewall (DFW)	vCPU Optimized vCPU Full	Baseline Overage	Additional functionality to offer Micro segmentation.

MPC Operational Console

The MPC Operational Console offers automation tooling and an API to manage your MPC resources.
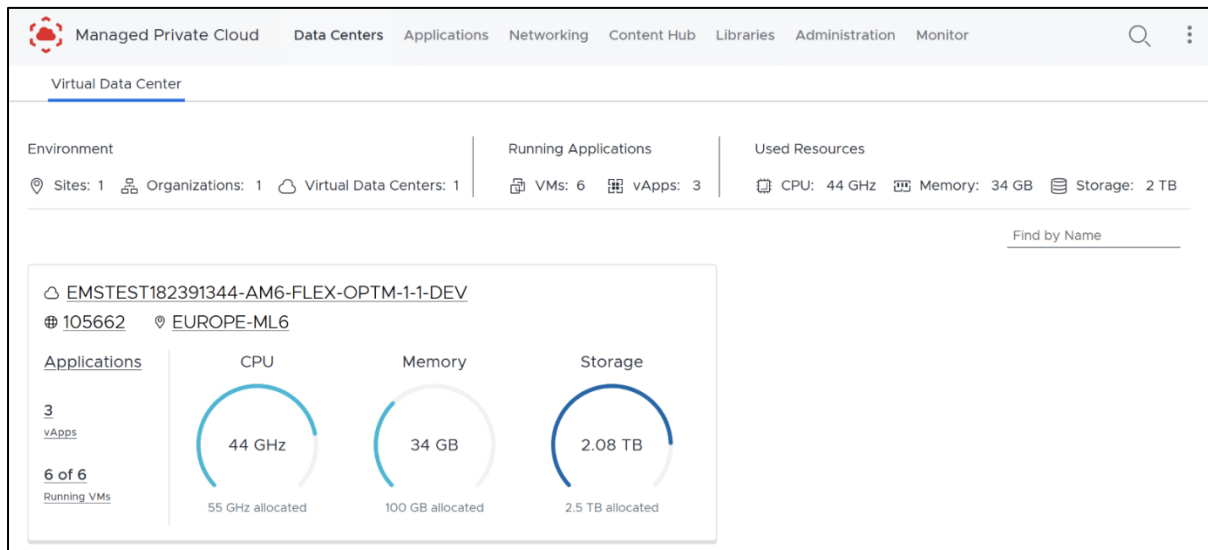
Features offered by the MPC self-service portal are:
- Management of OVDCs across multiple Equinix data centers
- Creation, import and managing VMs and vApps
- Sizing VMs (scale up and down)
- Create VM Snapshot
- Console access to the VM
- Performance statistics
- Creating and filling "Library" with your ISO/OVA files
- Direct access to MPC self-service portal and the VM console via web browser without complex VPN solutions
- Extensive options for scripting & automation (API)

- Separate or group VMs for availability or performance
- Manage firewall rules and micro segmentation
- Create and manage routing rules Static and Dynamic for IPv4
- Create and manage routing rules Static for IPv6
- Create and manage NAT, DHCP and VPN (layer 2)
- Create and managed VPN IPSec layer 3 Site to site "tunnel" based
- Create and manage Virtual Routing and Forwarding (VRF)

Service Options

Several service options are available on MPC ST. You can order the service options individually.

Back-up & Restore

Back-up & Restore of MPC resources are provided through the Managed Private Backup Service (ordered separately).

The service includes the backup of VM data or application data.

Software Licensing

A Catalog with software ISO's for MPC is available in the Self-service portal. This catalog lists the software that can be used in the VMs that run in the OVDCs. The catalog offers both open source and licensed software.

The licensed software can be purchased via the Software licensing product.

Bring Your Own License

If rather than procuring the service, you can choose to "Bring Your Own" software licenses, it will be necessary to validate the software providers license rules.

For all licensing the customer is responsible to meet the software vendor compliance rules.

Support Plan

With the support plan, you can choose to have an additional service for the charge of additional service requests and other services like additional support, additional reporting, and design support.

Managed Solutions Premier Support Plan is a prepaid program that allows you to purchase a Monthly or Annual (one-time payment) block of Support hours at a discount. Equinix will calculate the provision of the Support hours in increments of fifteen (15) minutes.

Without a prepaid Managed Solutions Premier Support Plan, you will be charged the "Premier Support Service" per hour (standard hourly rate). Equinix will calculate the provision of the Support hours in increments of fifteen (15) minutes.

PURCHASE UNIT	TYPE	CHARGE TYPE	UOM	ORDERING AND BILLING
Technical Support plan	Monthly	Baseline	hour	Monthly reservation of hours for technical support
	Annual	Baseline	hour	Yearly reservation of hours for technical support

The plan is not designated to one specific Managed Solutions Product but applicable to all Managed Solutions Products purchased.

In the case that all the hours have been consumed from the Plan, the additional hours will be charged against the "Premier Support Service" per hour (standard hourly rate).

Monthly or Prepaid Managed Solutions Premier Support Plan hours do not roll over and are forfeited if not used. Prepaid Managed Solutions Premier Support Plan usage beyond the pre-purchased allotted amount will be billed at regular "Premier Support Service" rates unless an upgrade is requested.

The Plan is country specific and cannot be linked to a specific IBX data center.

Migration support

To migrate customers workloads from On Premises to MPC, Equinix provides migration tooling that makes it possible to migrate workloads in Self Service without refactoring the applications. The tooling supports VMware workloads from vSphere or Cloud Director. To enable, customer will receive an appliance that can be installed in customers VMware environment and that will be paired with customers MPC environment. The tooling supports asynchronous replication.

By default the migration tooling supports migration over Internet, on request a private connection can be created over Equinix Fabric, the cost for the Fabric connection are charged via Fabric. For migration over Fabric existing Virtual Circuits cannot be used, they need to be propriate to the migration. Over internet speeds up to 400Mbps while for a Fabric connection speeds up to 10Gbps are supported.

The use of the migration tooling is Free of Charge, additional support can be requested via the Support plan.

CONNECTION	SPEED	NETWORK CONFIGURATION
Internet	Up to 1Gbps	No
Fabric	Up to 10Gbps	Yes, Setup VLAN's

After the migration has been completed the tooling will be disabled.

Service Demarcation & Enabling Services

Limitation

MPC ST is a Managed Service with limitations on Self-Service and functionality to maintain performance, availability, and security.

Generic
- Access to vSphere or vCenter functions is only possible through the MPC Operational Console and API.
- Integrations between vCenter and vSphere is limited to the functionality of the MPC Operational Console.

Compute
- Creating a Snapshot of a VM is limited to a single concurrent Snapshot.

Virtual Disks
- You cannot move virtual disks between VMs via the MPC Operational Console and API. To move virtual disks between VMs you need to create a ticket through Equinix support desk.
- Sharing a virtual disk between multiple VMs is not supported. Applying Microsoft Windows Server Failover Clustering (WSFC) with shared disks to MPC is not supported.

Network
- Application of Single Root I/O Virtualization (SR-IOV) and physical NIC access from the VM are not supported.
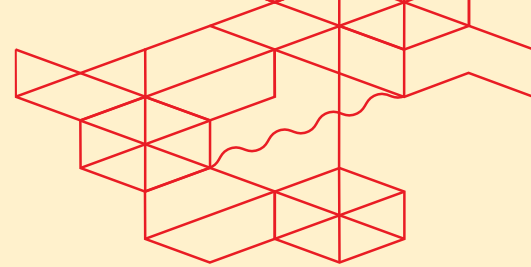
Purchase Units

The MPC Service is charged based on Baseline values or Baseline with Overage charge types, in the related topic in the Service Description the functionality of the services is described.

Charge types

Baseline – the specific volume of Unit of Measure of the Service as defined in the Order.
Overage – the quantity of the Service consumed by Customer that exceeds the contracted Baseline Volume.

Catalog of Purchase Units

Below are the purchase units of Managed Private Cloud with the unit of measure and the related billing method.

| CATEGORY	PURCHACE UNIT	UOM	INSTALL FEE	BILLING METHOD	OVERAGE
MPC Service	Connectivity - Routed	Each		Baseline	
	Connectivity - Customer Routed	Each		Baseline	
	Connectivity - Managed Firewall	Each		Baseline	
	Connectivity - Joined	Each		Baseline	
MPC Compute	Host	Host	Yes	Baseline	Yes
MPC Storage	High Performance	TB		Baseline	Yes
	Performance	TB		Baseline	Yes
MPC Service Option	Network - Managed Virtual Circuit xx Mbps	Each	Yes	Baseline	
	Network - Managed Internet Access xx Mbps	Each		Baseline	
	Network - Additional IPspace /24/25/26/27/28/29	Each		Baseline	
	Network - External network	Each	Yes	Baseline	
	Network - Distributed Firewall per Host	Host		Baseline	

Calculation of Overage values

The consumption of MPC is measured multiple times a day. Every day the maximum used consumption of that day is used for the Overage calculation. The Overage value for billing is calculated as the sum of the day values divided by the number of days of that month. So the formula for Overage in a month is (Sum (Maximum day consumptions over baseline)per day / number of days in the month).

The number of days in a month is calculated as the number of days between the fore last day before the start of the month until the fore last day in the next month. For example, the consumption over October will be billed from 29th of September to the 30th of October.

Days	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Date	29	30	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	
Contracted Baseline	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	
Customer Usage	160	120	180	180	180	180	100	100	100	120	150	170	200	260	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	
Max Overage per Day	10	0	30	30	30	30	0	0	0	0	0	20	50	110	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	1110
Wheighted value	0.3333	0	1	1	1	1	0	0	0	0	0	0.6667	1.6667	3.6667	1.6667	1.6667	1.6667	1.6667	1.6667	1.6667	1.6667	1.6667	1.6667	1.6667	1.6667	1.6667	1.6667	1.6667	1.6667	1.6667	37

In this example the Overage for billing for this month is 1110/30 = 37
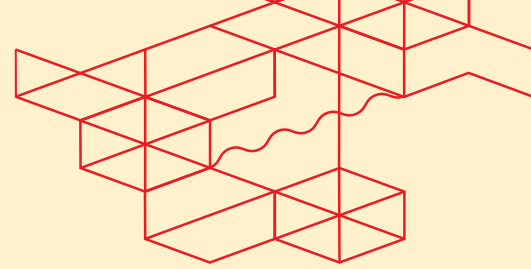
Roles & Responsibilities

In the fulfilment and delivery of the services there is a responsibility both for Equinix as for the customer, below there is an overall explanation of these responsibilities.

Tenant Provisioning

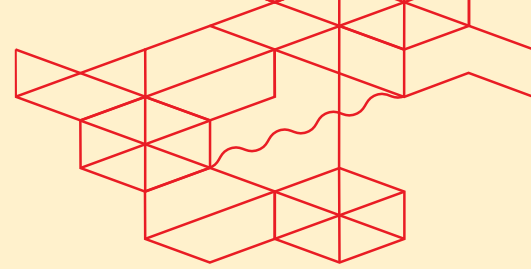| ACTIVITIES	EQUINIX	CUSTOMER
Schedule / execute project kickoff meeting	RA	CI
Schedule / execute customer onboarding	RA	CI
Delivery of the Hosts in a cluster in accordance with the order	RAC	I1
Delivery of the OVDC(s) in accordance with design	RAC	I1
Delivery of the agreed storage capacity in accordance with design	RAC	I1
Delivery of the Connectivity type in accordance with the order	RAC	I1
Delivery of the Managed Virtual Circuits in accordance with the order	RAC	C
Delivery of the Managed Internet Access in accordance with the order	RAC	C
Delivering the agreed network functionality in accordance with design (optional)	RAC	C
Delivery of the MPC Operational Console	RAC	I1
Delivery of the Admin account for the Operational Console	RAC	I1

Acceptance Into Service

Once Onboarding activities have been finished, then testing activities will confirm if the product was delivered successfully and it is ready to be billed.

ACTIVITIES	EQUINIX	CUSTOMER
Test access to MPC Product page on Managed Solutions Portal	CI	RA
Test access to MPC documentation on docs.equinix.com	CI	RA
Test access to MPC operational console	CI	RA
Confirm MPC fulfillment based on preview evidence	CI	RA
Set product as enabled for customer on internal systems	RA	I

Operational

Once the Managed Private Backup service is enabled to customers, some operational items will be addressed as below:

ACTIVITIES	EQUINIX	CUSTOMER
Technical management of the service (overall)	RAC	I[1]
Functional management of the customer environment within the service (overall)	I[2]	RAC
MPC infrastructure monitoring and maintenance	RA	I
Create, import and manage VMs and vApps	I[2]	RAC

Scale VMs up and down	I[2]	RACI
Manage VM Snapshots		RACI
Manage access to VMs with console		RACI
Request performance statistics		RACI
Create and fill "Library" with Customer's own ISO/OVA files		RACI
Separate or group VMs for availability or performance	I[2]	RAC
NFV: Virtual L2 networks	I[2]	RAC
NFV: Standard firewalling	I[2]	RAC
NFV: Routing (static)	I[2]	RAC
NFV: Routing (dynamic OSPF / BGP)	I[2]	RAC
NFV: NAT	I[2]	RAC
NFV: DHCP	I[2]	RAC
NFV: Load Balancing	I[2]	RAC
NFV: VPN (IPSec, Client)	I[2]	RAC
Setup and manage scripting & automation capabilities		RACI

Note: RACI stands for Responsible, Accountable, Consulted and Informed.
Footnote:

1. *Informing is only mandatory for tasks that have an impact on the functioning of user environment.*
2. *Informing is only required for tasks that have an impact on the operation and/or management of the service.*
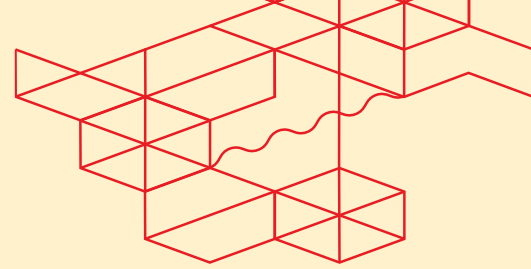
Incident Management

Incident management is included in service support. All incidents are handled based on priority. Priority is determined after the failure has been reported and assessed by Equinix based on the provided information.

PRIORITY	IMPACT/URGENCY	DESCRIPTION
P1 High	Unforeseen unavailability of a service / environment delivered and managed by Equinix, in accordance with service description due to a disruption. The user cannot fulfill its obligations towards its users. The user suffers direct demonstrable damage due to the unavailability of this functionality.	The service must be restored immediately; the production environment(s) is/ are unavailable, with platform-wide disruptions.
P2 Medium	The service does not offer full functionality or has partial functionality or a reduced performance, because of which the users are impacted. The user suffers direct demonstrable damage due to unavailability of the functionality. The service may be impacted due to limited availability of this functionality.	The service must be repaired the same working day; the management environment is not available.
P3 Low	The service functions with limited availability for one or more users and there is a workaround in place.	The moment of repair of the service is determined in consultation with the reporting person.

Note: This classification does not apply to disruptions that are, for example, caused by user-specific applications, actions by the user, or dependent on third parties.
The incidents can be submitted in the ECP in the Managed Solutions section.
P1 incidents need to be submitted by phone.

Service Requests

The following standard changes can be requested through the MPC self-service portal as a service request.

Customers can raise a Service Request for configuration changes that cannot be implemented through Self Service in the Operational Console.

There is 24x7x365 support for the Managed Private Cloud Service.

There are two types of service requests available:
- **INCLUDED**: Service Requests which are in scope of the Service, and as such, no additional charges apply.
- **ADDITIONAL**: Service Requests which are out of scope of the Service, and therefore additional charges apply.
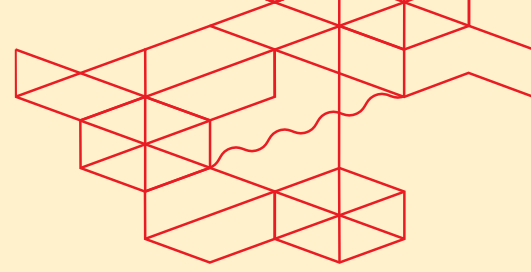
REQUEST NAME	INCLUDED/ADDITIONAL
Create a DC Group over multiple OVDC's	Additional
Change external access OVDC API	Additional
Add a user for the Operational Console	Included
Remove a user from the Operational Console	Included
Change permissions for a user	Included

Note: Included means the request is part of the service and has no additional implementation cost. Additional means the service request has additional cost and its execution requires an approval in the MPC self-service portal.

All changes not listed in the table above can be requested by the customer by selecting "change" at the service request module. Equinix will perform an impact analysis to determine whether the change can be implemented and to determine associated costs and lead time.

Any charges related to Service Requests will be deducted from the Premier Support Plan Balance (See the Service Description for Premier Support for more details), or in case of insufficient balance invoiced in arrears based on the prevailing rate.

Changes in the baseline capacity, amount ordered or any other change that will have an impact on the monthly service fee should be requested via the Sales team.
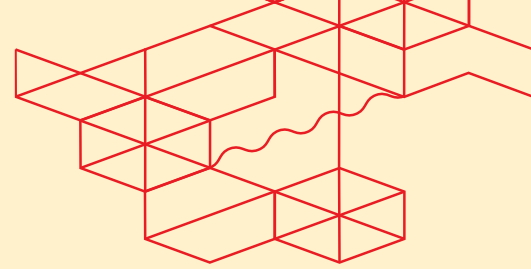
Reporting

As part of the service, customer will receive monthly service reporting covering the following topics:

- Raised tickets against the SLA parameters
- Capacity per OVDC

Service Levels

The purpose of this Service Level Agreement (SLA) is to define the measurable performance levels associated with the MPC service and specify remedies available to Customer if Equinix fails to achieve these levels. The service credits listed below are the sole and exclusive remedy for any failure to meet the service level thresholds stated herein.

Support

The SLA on support applies to the incident registration and resolution (see section 4.4 of this document).

PRIORITY	RESPONSE TIME[1]	RESOLUTION TIME[2]	EXECUTION OF WORK	SLA[3]
P1	< 30 min	< 4 hours	24 x 7	95 %
P2	< 60 min	< 24 hours	24 x 7	95 %
P3	< 120 min	< 5 days	24 x 7	95 %

Note:
1. *Response time is from submitting the Trouble tickets and an Equinix Managed Solutions specialist sending a formal response.*
2. *Resolution time of a case is from registering to closing or cancelling the Trouble Ticket in the ITSM Tool or the hand over to IBX Support.*
3. *SLA applies to the response time, details on the SLA can be found in the Product Policy.*

Availability

The availability level of the MPC service is shown in the table below and refers to the availability of a single OVDC. The MPC service is considered "**Unavailable**" when a failure in the infrastructure managed by Equinix means that the OVDC operating on it is in an error status and there is an interruption to the customer's services caused directly by that error.

AVAILABILITY SERVICE LEVEL	DESCRIPTION
99.95%+	This is met by achieving less than twenty-two (22) minutes of Unavailability of the OVDC over a calendar month period.

A Service credit regime is available on the availability SLA, this is described in the Product Policy.

The availability of MPC does not include the restore of the data. Customer self is responsible for restoring the data. When you have contracted Managed Private Backup, you can restore the data by using Self Service in the Managed Private Backup Operational Console.

If you have chosen not to contract Managed Private Backup, customer needs to take care of the data restore themselves.
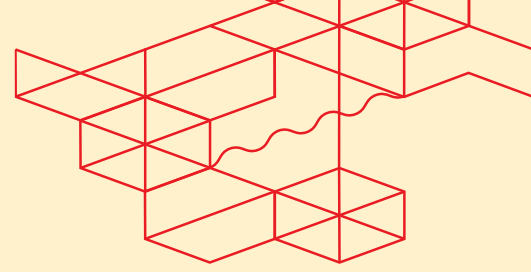
Other documentations

Where to find more documentation?

You will find the most up to date documentation on docs.equinix.com website.

Where to find EMS policy?

You will find it on our website.

Where to find official VMware documentation?

You will find it on https://docs.vmware.com

How to ask for help

Please make sure to open a ticket every time you need help. This is your guarantee that the right team has received your request and will work on that under the expected SLAs.