

Ipanema SD-WAN CLOUD Service Description June 2020

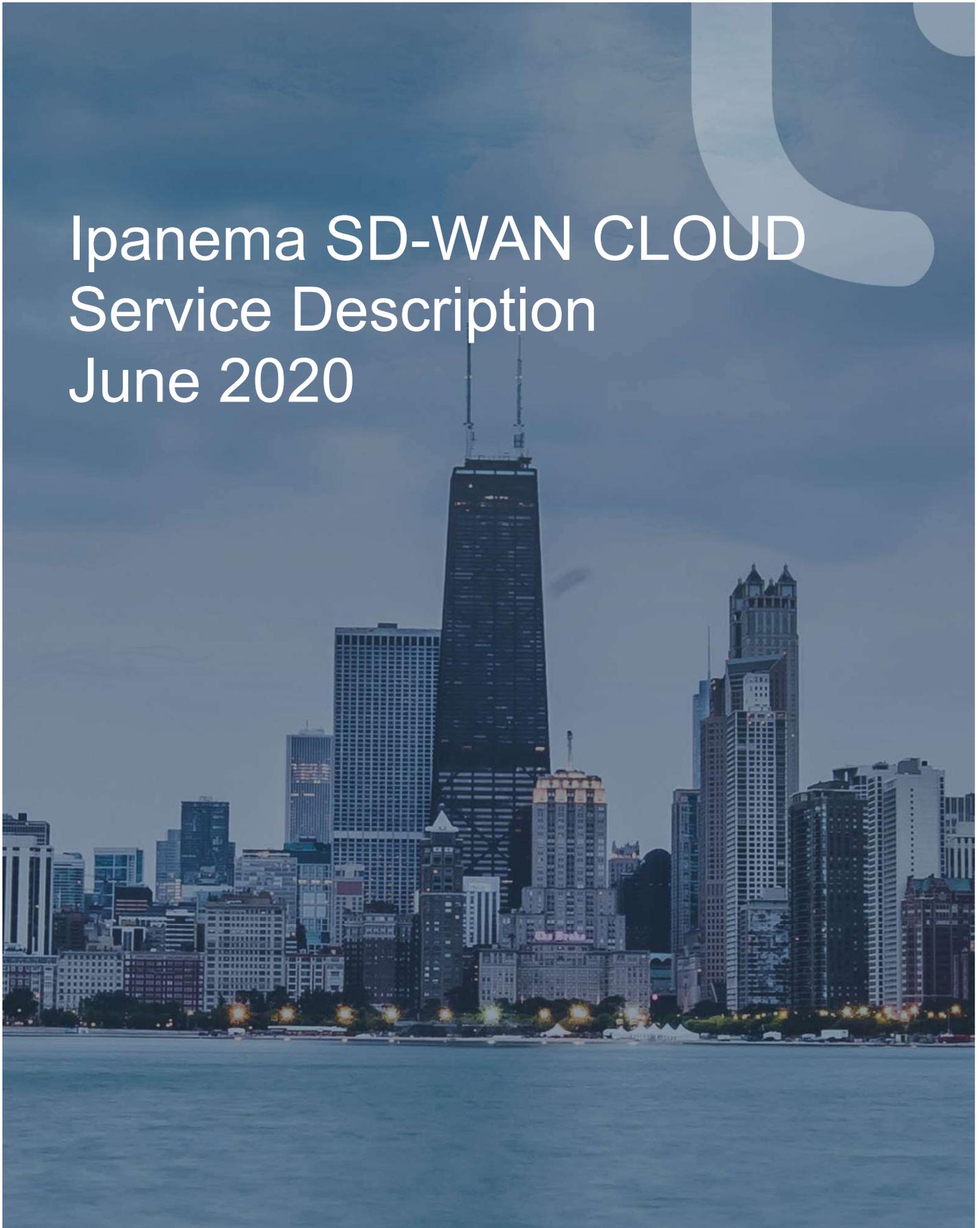


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1. Introduction to Infovista

Infovista, the leader in modern network performance, provides complete visibility and unprecedented control to deliver brilliant experiences and maximum value with your network and applications. At the core of our approach are data and analytics, to give you real-time insights and make critical business decisions. Infovista offers a comprehensive line of solutions from radio network to enterprise to device throughout the lifecycle of your network. No other provider has this completeness of vision. Network operators worldwide depend on Infovista to deliver on the potential of their networks and applications to exceed user expectations every day. Know your network with Infovista.

2. Infovista Cloud Overview

Customer satisfaction is very important for Infovista, and that is the reason why we are committed to providing you with the most reliable service to help you run your Ipanema SD-WAN solution in the Cloud.

Infovista relies on a well-established infrastructure provider that guarantee the highest levels of availability and security. When you subscribe to Ipanema SD-WAN Cloud, your organization's data is stored in a secure and hermetic ecosystem, in Microsoft Azure.

- Our support plan offers a 24x7 web-based incident reporting including email and telephone support.
- Our service offers, as a minimum, a 99.5% uptime.
- Backups are performed in regular intervals following the data retention policy.
- To ensure quality and reliability of the Ipanema SD-WAN solution in the Cloud, software upgrades & hotfixes are provided.

3. What is Ipanema SD-WAN Cloud: A technical description

3.1 Cloud perspective

The Ipanema SD-WAN solution in the Cloud for our clients are fully virtualized and based on multiple Microsoft Azure components, such as appliances, virtual machines and databases...

Customer Interface is designed to be displayed on the following web browsers: Microsoft Edge, Microsoft Internet Explorer, Google Chrome, Mozilla Firefox and Safari.

As far as our Cloud is hosted on Microsoft Azure, the potential geographical location of the data center could change according to customer's or Infovista's expectations.

Microsoft Azure meets a broad set of international and industry-specific compliance standards, such as ISO 27001, HIPAA, FedRAMP, SOC 1 and SOC 2, as well as country-specific standards for example: Australia IRAP, UK G-Cloud, and Singapore MTCS (<https://azure.microsoft.com/en-us/support/trust-center/>).

Infovista has chosen the following Microsoft data centers to host its Ipanema SD-WAN Cloud services

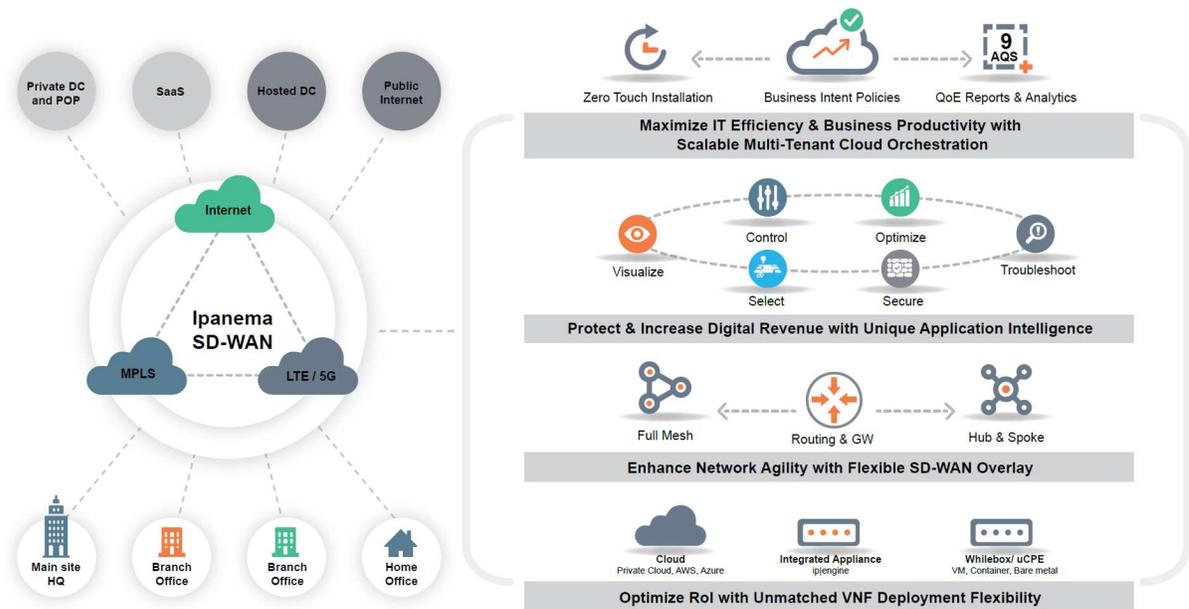
- Netherlands : Amsterdam

3.2 Functional perspective:

Ipanema SD-WAN Cloud uses a multi-layered software-based scalable and modular architecture to help enterprises meet their business objectives to ensure digital customer experience, increase business agility and productivity, and maximize profitability.

The overall solution is built on five key components:

- Unique Application Intelligence Microservices
- SD-WAN Overlay Routing and Tunneling Microservices
- Flexible Edge and Cloud Devices
- Scalable Multi-tenant Cloud Orchestration
- Software level domain segregation between customer's environments

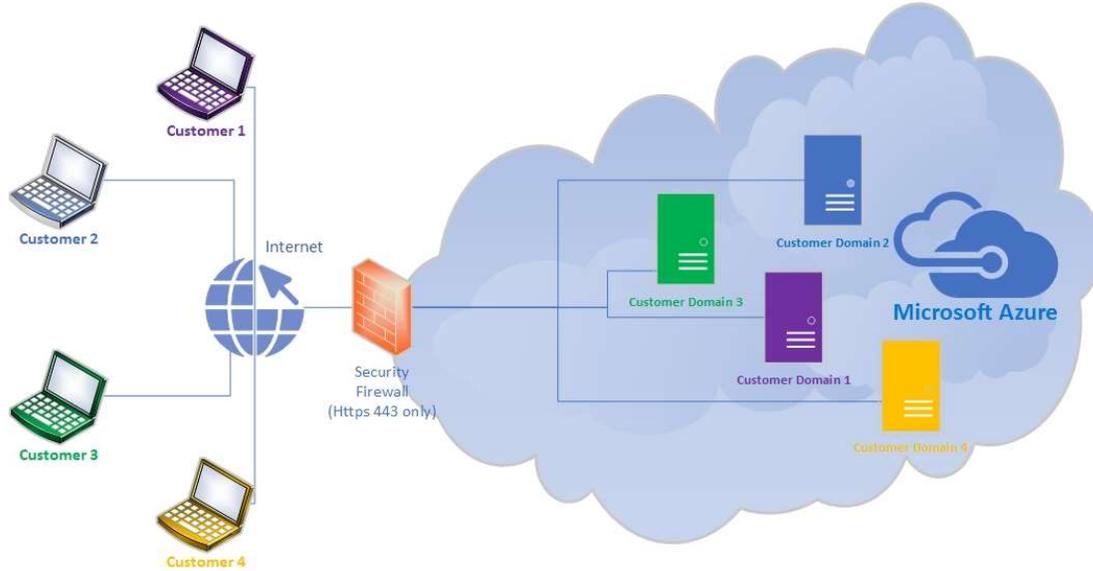


4. Ipanema SD-WAN Cloud services

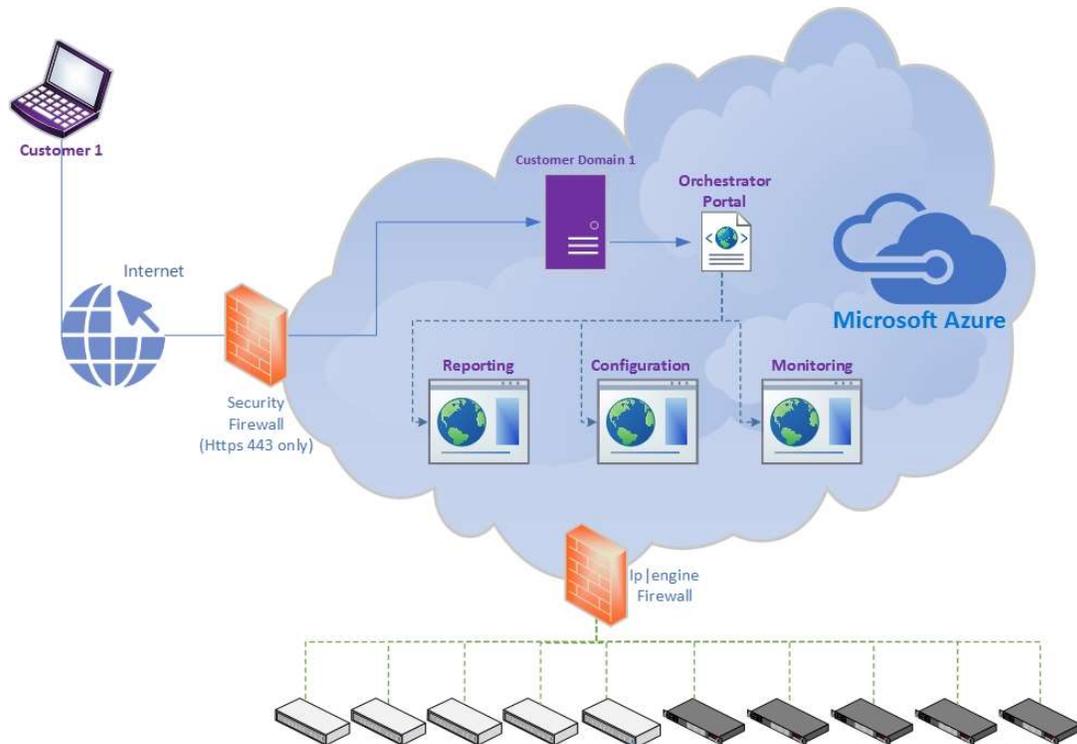
The Ipanema SD-WAN solution is orchestrated by a series of components hosted in the cloud. The Ipanema SD-WAN Cloud service runs the Orchestration platform and makes it available to customers and Partners:

	Zero Touch Provisioning	<ul style="list-style-type: none"> • 24x7 Monitoring • Geo Redundant Backups • Multi-tenant • Scalable and reliable • No Platform deployment required to use the Ipanema SD-WAN solution. Plug your SD-WAN appliances and Go.
	Orchestrator	
	Reporting	

Each new customer will have a specific and private virtual environment, fully isolated from other customers as described in the following schema:



Here is another schema to show you how you will use Ipanema SD-WAN Cloud features:



5. Ipanema SD-WAN Orchestrator Production system details

5.1 Maintenance

To follow DevOps lifecycle, InfoVista delivers a new version every 3 months. Some corrective patches can be delivered at maximum every month.

Versions and corrective patches release notes are available through the Infovista support web site. In case of emergency, a dedicated patch can be designed and deployed on an internal Pre-Production platform before it is deployed on the Production platform.

Scheduled maintenance (OS, hardware etc.): System and software maintenances are performed during the weekend for a couple of hours. For Major Update Customer is informed 3 weeks before.

Unscheduled maintenance: Ipanema SD-WAN solution patches deployments may be performed out of the working hours (linked to the datacenter geographical location).

5.2 Service Impact during maintenance Windows

During a maintenance window, the following services are not available anymore:

- Domain configuration
- Reporting: According to the maintenance, report and/or data collection might be temporarily stopped.
- Appliances supervision

Whatever the maintenance type, Appliances continue to work as defined and traffic is not impacted at all.

5.3 Upgrade

Ipanema SD-WAN Cloud platforms will follow the same version lifecycle. Infovista notifies administrators when software upgrades are planned, including timing and content. For example, positive impacts on performance, security and reliability of the Ipanema SD-WAN Cloud services.

When an upgrade is planned, the Ipanema SD-WAN Cloud Service team will email you regarding the upgrade plan. The information is also available on our Infovista customer portal (<https://support.infovista.com>). Our Infovista Support Website provides the list of all Version's release notes (past and current) along with a list of the additional functionalities and fixes they provide.

5.4 Service Level

The Ipanema SD-WAN Cloud Service monitoring system is based on Prometheus to continuously monitor the infrastructure and customer's platforms availability allowing notifications to be sent to the Ipanema SD-WAN Cloud Service administrators in case of issues. It's also used to do a capacity planning of its platforms.

In addition to Prometheus, a dedicated functional scenario is executed every 10 minutes, it simulates a user behavior/actions on the web interface. It allows Ipanema SD-WAN Cloud Service to ensure that any customer can use Ipanema SD-WAN as usual. On top, specific alerts are monitored to detect any unusual software behavior.

The Ipanema SD-WAN Cloud Service is up 99,5% of the time and the rest is used for maintenance tasks. Service availability is based on an SLA agreement:

This SLA excludes the weekly scheduled maintenance* (2hours per Sunday):

Service Availability	Objectives
Maximum unscheduled outage duration	3 hours
Maximum monthly unscheduled outage	4 hours
Maintenance (excluded from SLA)	Scheduled maintenance (for Major Update): 20 days notice
	Unscheduled maintenance (for minor update): 2 days notice
	Immediate customer notification in case of security incidents

Backup	Daily	Weekly	Monthly
Backup Retention Period	7 days	4 weeks	6 months

* Weekly scheduled maintenance includes:

- security patch deployment
- database re indexation
- process memory purge
- Hotfix deployment

Weekly scheduled maintenance occurs on Sunday from 12:00 to 14:00 CET.

During this period, the orchestrator interface may be unreachable. The ip|Engine interconnections and links services remain up, there is neither underlay nor overlay disruption. User traffic is not impacted.

6. Limitation & Responsibility

Ipanema SD-WAN Cloud team does not configure nor supervises the customer domains. The monitoring focuses on the availability of the platform and the availability of the service. All network connectivity questions between sites will either be managed by the customer directly or the partner.

The Ipanema SD-WAN Cloud team performs the following actions:

- Deploying new platforms and extending existing platforms in the cloud
- Creating customer’s virtual environment
- First registration of the appliances in the Ipanema SD-WAN “Zero Touch Provisioning” process (note that this is only the first registration. The partner will, at some point, need to associate the appliances to the proper customer).

The authorized partner is managing the following actions:

- Appliance deployment and upgrade on the customer sites.
- Monitoring Connectivity between the sites and the internet
- Appliance configuration
 - o Networking configuration (IP, IPsec VPNs etc...)
 - o Applicative configuration (which Applications should the system control, compress? Which Network policy should be set to which Application or Group of Applications?)
- User management

6.1 Cloud team overview

Title	Role	Location	Actions
Cloud Production Manager	Ensure Onboarding and overall Service Delivery Quality	Europe	Service Quality Review First Escalation Level on service availability issue Operational and work progress review Customer onboarding
Cloud Engineers	Cloud Environment management	US, Europe, Asia	Platform fixes and upgrade Platform & Hosted Environment management

Proactive customer notification before planned maintenance window
Service availability monitoring

6.2 Responsibility spreadsheet:

Actions	Cloud Team	Partner Team	Customer
Platform deployment	X		
Platform scalability	X		
Service availability monitoring	X		
Customer environment creation	X		
ZTP ip engine first registration	X		
ip engine deployment		X	
ip engine to customer environment association		X	
Routing definition		X	X
ip engine configuration		X	
ip engine upgrade		X	
ip engine monitoring		X	
ip engine availability		X	
Applicative definition		X	X
Applicative configuration		X	
User definition		X	X
User management		X	
User training		X	

7. Subscription and on-boarding

7.1 Domain creation

The creation of a Domain is done:

- upon reception of a valid purchase order. The request is managed through InfoVista Business Management Team
- upon validation of an InfoVista channel director for Proof of Concept purpose.

The following information must be provided through the following email address cloud.sdwan@infovista.com :

- target number of sites,
- domain name,
- email address and name for the admin of the domain.

The Ipanema SD-WAN Cloud team creates the customer's domain within 24 hours upon delivery of the form. An email is sent including the credentials to the new domain's administrator. This email is a proof of delivery.

The creation of the domain must be done before the delivery of the appliances.

7.2 Appliances delivery (ip|engine)

Appliances serial number must be associated to the customer within the Zero Touch Provisioning Portal.

This operation is done by the reseller or InfoVista supply organization during the delivery process to the partner / customer.

For virtual|engine, customer must send the UUID through a ticket raised to Infovista support (support.wan@infovista.com)

7.3 Configuration & Optimization

After the appliances' deployment and domain creation, the partner configures the appliances to enable routing between them

Once the configuration is finished and according to customer needs, the partner configures the applications optimization and prioritization through the established network.

At this step the customer can validate the solution.

7.4 The communication

Actions	Cloud Team	Partner Team	Customer Admin	Customer User
Platform deployment	Sender	Notified	Notified	
Customer environment creation	Sender	Notified	Notified	
ZTP ip engine first registration	Sender	Notified	Notified	
Platform Change Management	Sender	Notified	Notified	
Platform Incident management	Sender	Notified	Notified	
ip engine deployment	Notified	Sender	Notified	
ip engine to customer environment association	Notified	Sender	Notified	
Routing definition		Exchange	Exchange	
ip engine configuration	Notified	Sender	Notified	
ip engine Change Management	Notified	Sender	Notified	
ip engine Incident management	Notified	Sender	Notified	
Applicative Definition		Exchange	Exchange	
Applicative Configuration	Notified	Sender	Notified	
User definition		Exchange	Exchange	
User management	Notified	Sender	Notified	Notified
User training	Notified	Sender	Notified	Notified

8. SD-WAN Platform main contacts

Hosting delivery	
Contact	cloud.sdwan@infovista.com
	SD-WAN Customer onboarding and ip engine registration
	Usage activity
Contact purposes	SLA Reports
	Cloud Platform Service activation
	Service Review Meeting
Support and maintenance	
1 st /2 nd line Technical Support	Delivered by the partner
3 rd line Technical Support	Included: support.wan@infovista.com
Support availability	24x7 (for P1 and P2 tickets). – Please refer to the InfoVista Quality Charter for more details
Support language	English
Online support available	https://support.infovista.com
Contact purpose	Service degradation and failures
	Security and Connectivity issues
	Hosted environment support and troubleshooting

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