Corente Cloud Services Exchange

ORACLE
VIRTUALIZATION

Oracle's Corente Cloud Services Exchange (Corente CSX) is a cloud-based service that enables distributed enterprises to deliver trusted IPSec VPN connectivity services to and from any location with less complexity, in significantly less time, and at a greatly reduced cost, when compared to traditional approaches. Corente CSX enables organizations to leverage the agility, flexibility, and scalability benefits of a software-defined WAN.

KEY FEATURES

- Delivery of trusted VPN connectivity services to and from any location
- Stateful firewall services including mutual consent partner brokering as well as auto-resolve NAT and PAT
- Secure point-to-point connection services including: 1024-bit RSA, 256-bit AES encryption, SHA-2 data authentication
- Automated key creation, distribution, and regeneration, and synchronous PKI digital certificates
- Application traffic prioritization
- Network, session, application, and server monitoring, tracking and reporting
- Streamlined auditing with compliance monitoring, tracking, and reporting
- Anywhere, anytime access with remote access, mobile clients
- Rapid, zero-touch Services gateway deployment options

KEY BENEFITS

- Eliminate the complexity and fragility of deploying and managing global networks
- Gain control and visibility of your enterprise network across the cloud
- Ensure secure, centralized remote WAN management and administration
- Reduce costs, decrease risk, and scale easier and faster

Challenges of Today's Cloud Networks

Today's enterprises need to connect with their entire enterprise ecosystem consisting of internal and external customers, independent business units, partners, branches, and franchises. They must securely deliver a growing portfolio of cloud-based applications and services to their ecosystem while providing the same security and trust of internal private networks. However, if enterprises choose to use traditional methods with a dedicated infrastructure of private IP connections they quickly become encumbered by complex and lengthy set up and management processes.

Enterprises are now looking for new ways to deliver application connectivity by leveraging the infrastructure of the public Internet. Traditional service delivery wide area networks are costly, rigid, difficult, and fragile to manage.

Corente CSX Overview

Through its patented intellectual property, Corente CSX combines network virtualization with a cloud approach and extends virtualization across the complexity of global IP networks, all the way to the enterprise network edge. By subscribing to Corente CSX, organizations can take the complexity and fragility out of deploying and managing global ecosystem networks.

Corente CSX relies on the Oracle-hosted Service Control Point (SCP), which is a centralized service management platform hosted by Oracle, that provides secure policy-based service brokering, mediation, and virtual network orchestration.

A component of Corente CSX, the Corente Services Gateway (CSG) is a distributed virtual appliance located at the network edge that provides secure endpoints for virtual private networks over any IP networks with zero-touch installation. A Corente Services Gateway is installed at each branch or partner location, and creates a secure end-to-end connection with each other for application traffic. The Corente Services Gateway also maintains separate out-of-band connections with the SCP database for monitoring, administration, and logging.

Corente Services Gateway software can be installed on commodity x86 bare metal hardware, or on supported hypervisor VM's. In addition, support for Corente Services Gateway connectivity to a 3rd party IPSec VPN gateway appliance is available.

Rapid, Zero-Touch Deployment

The Corente Services Gateway is easily deployed through a fast and automated installation process with no local IT presence required. Corente Services Gateways are typically shipped to any location, and installed and configured remotely in less than 30 minutes. Furthermore, software updates and upgrades are automatically deployed whenever they are released, per the company's specified maintenance window.

Easy to Use, Role-Based Administration

The App Net Manager service portal in Corente CSX is a web-based application that provides centralized, role-based access to service life cycle management tools for service subscribers, including provisioning, managing, and monitoring of their global private networks.

The network infrastructure including gateway configuration and deployment is managed from a single interface through App Net Manager. In addition, the portal allows administrators to configure system policies; create fine-grained access policies for users, applications, servers and other network resources; manage all connections through the simplicity of drag-and-drop UI; set thresholds for alerts; monitor real-time status of resources; and view historical reports.

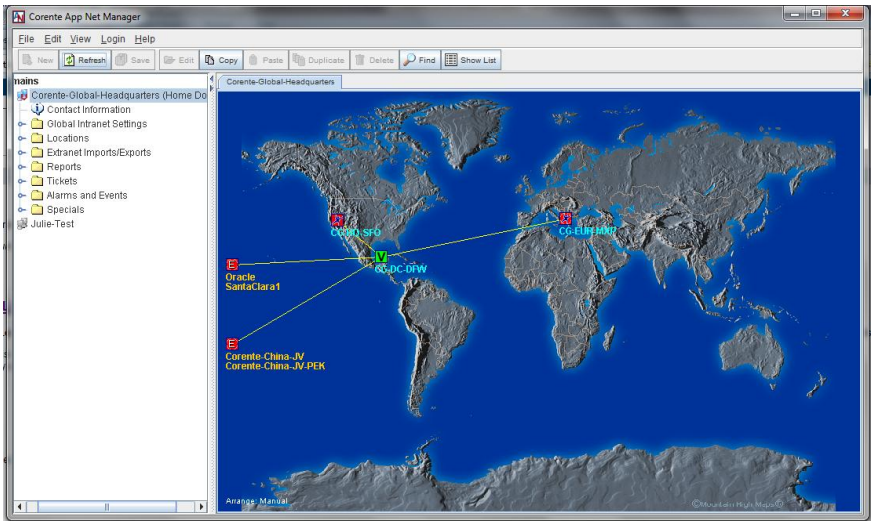

Figure 1. App Net Manager portal for consolidated service management and monitoring

Robust Security and Partner Brokering

Corente CSX's instrumentation and control system automates the management of applications and services from various sources to diverse locations in a verifiably secure, compliant and reliable manner.

Security, encryption, and authentication capabilities include:

- **Tunneling.** Internet Protocol Security (IPSec) encapsulating security payload
- **Authentication.** SHA-2 hash algorithm
- **Encryption.** 192-bit Advanced Encryption Standard (AES) (CSG); 128,192, & 256-bit AES (3rd Party IPSec VPN Appliance)
- **Key Exchange.** Internet Key Exchange (IKE) protocol
- **Key Generation.** Public/private key pairs (1024-bit RSA keys) with immediate revocation

Other key security capabilities include an integrated Public Key Infrastructure (PKI) certificate authority, peer to peer authenticated connections, perfect forward secrecy, access policy control, and a programmable, managed, stateful firewall.

Corente CSX's partner brokering capability provides mutual consent-based control and management of the complex trust relationships between extranet partners. Each extranet partner is given independent administrative control of their own partner connections and can completely shield visibility into the network infrastructures of other extranet partners. Furthermore, partner connections can quickly be set up or taken down.

Network Visibility and Control

Service Gateways create end-to-end connections and inspect every session they handle so that non-invasive monitoring is performed on all traffic in real-time. This enables Corente CSX to provide robust monitoring, alerting, and reporting capabilities.

Corente CSX provides 24/7 monitoring of application, server, gateway and network status, with a variety of configurable alerts and reports as well as complete audit trails of all administrative changes and connections by remote users. Corente CSX also tracks and logs every application session in Syslog format to provide customers the detailed audited usage and access logs required for security audits and Sarbanes-Oxley regulatory compliance.

Automated Network Management Services

Corente CSX provides automatic detection, mediation and notification of IP address conflicts. Corente CSX's advanced auto-resolve NAT and PAT abilities combine with its firewall policy management so new sites can be added quickly without renumbering subnetworks or the networks of any existing sites.

Furthermore, with Quality of Service (QoS) management, Corente CSX allows real-time monitoring of application performance, and QoS thresholds can be used to prioritize your applications based on your needs.

Anywhere, Anytime Access to Your Network

Corente CSX's Remote Access Clients provide subscriber users with remote, mobile access to their global applications through the Services Gateway. Application users can access global applications through the Windows and mobile (iOS, Android) Remote Access Clients.

Business Continuity

Corente CSX enables high availability configuration of each Corente Services Gateway for the dynamic rerouting of traffic to a designated failover WAN, as well as to a backup datacenter or hosting facility. Corente Services Gateway hardware failover can also be

configured where two machines are connected to allow the secondary machine to take over when the primary machine fails.

Backed by Oracle's World Class Support

Oracle Support provides essential support services including 24/7 technical assistance, proactive support resources, and product updates. With global coverage of development engineers and customer support specialists, Oracle delivers complete, dependable, fully-integrated support services.

Oracle's one-stop online technical support portal, My Oracle Support offers a wealth of resources for Corente CSX customers—including search knowledge, log and track service requests, sign up for alerts, view product health recommendations, and much more.

TABLE 1. KEY FUNCTIONALITY AND TECHNICAL SPECIFICATIONS

Management portal	**Service Policy Definition, Provisioning, and Activation** • *Authenticated, role-based administration* • *Automated policy checking and distribution* • *Configuration management* • *Automated software updates and upgrades*	
Security services	**Authentication and Encryption** • *Automated key creation, distribution, and regeneration* • *Client and server side digital certificates with synchronous PKI* • *SHA-2 data authentication* • *Instant key revocation* • *AES 192-bit encryption (CSG), AES 128,192,256-bit (3rd Party IPSec VPN Appliance)* • *Perfect forward secrecy* • *IP Security Encapsulating Security Protocol (ESP) tunnel mode* • *Restricted tunnel backhaul Internet access* • *Split tunneling direct Internet access*	**Firewall Services** • *Partner brokering services with mutual consent* • *Auto-resolve Network Address Translation (NAT)* • *Automated rule generation/configuration* • *Stateful packet inspection* • *Port Address Translation (PAT)* • *Fine-grained access control by site/app/user/protocol* **Extranets** • *Mutual consent security trust model* • *Instant synchronous certificate revocation*
Connectivity services	**Automated IP Address Management** • *Static or dynamic addressing* • *Dynamic Host Configuration Protocol (DHCP) client and server* • *Domain Name Services (DNS)* • *NAT, proxy, firewall and ICS device transversal* • *Inbound and outbound NAT and ICS* • *Automatic remapping of overlapping LAN addresses* • *Secure Naming Services (SNS)* **Routing** • *BGP, RIPv2, and OSPF*	**3rd Party IPSec VPN Appliance Support** • *Gateway connectivity to 3rd party IPSec appliances* **High Availability** • *Hardware failover* • *Data center failover* • *WAN failover* **Proactive Monitoring, Alerting, and Reporting** • *Availability, bandwidth, jitter, latency, and loss* **Remote Access** • *Windows Client* • *Mobile Client (iOS,Android)*
Application services	**Application Prioritization** • *Application data center fail-over* • *Session logs*	**Proactive Monitoring, Alerting, and Reporting** • *Availability, bandwidth, jitter, latency and loss*
Server and IP device services	**Proactive Monitoring, Alerting, and Reporting** • *Availability, CPU, disk and swap space*	
Minimum hardware requirements (x86)	**CPU** • *64-bit* • *1.5 GHz x86* **Memory** • *1 GB RAM* **Disk** • *40 GB SATA* • *No RAID Drives*	**Network** • *Peer configuration – 1 Integrated Ethernet Port* • *Inline configuration – 2 Integrated Ethernet Ports* • *DMZ configuration – 3 Integrated Ethernet Ports*
Performance	Up to 700 Mb/sec throughput	

ORACLE

CONTACT US

For more information about Oracle's Corente Cloud Services Exchange, visit oracle.com or call +1.800.ORACLE1 to speak to an Oracle representative.

CONNECT WITH US

blogs.oracle.com/oracle

facebook.com/oracle

twitter.com/oracle

oracle.com

Hardware and Software, Engineered to Work Together