Small Contact Center Agent Deployment Model

Small Contact Center Deployment

The Small Contact Center (SCC) deployment model splits your contact center into shared and dedicated components. It provides several options to serve specific customer needs. You provision the Central Controller and other core components in the shared layer. You can deploy the customer peripherals as either customer-dedicated or as shared. The SCC supports both dedicated and shared peripherals being used on a single instance, subject to aggregate solution capacity limits:

- **Dedicated components sub-customer option** – Dedicated Cisco Unified CM, Peripheral Gateway, and Cisco Finesse sized for either 100 or 500 agents.

- **Shared components sub-customer option** – Shared Cisco Unified CM, Peripheral Gateway, and Cisco Finesse support up to 2000 agents across 100 Department enabled sub-customers.

Note

- For Cisco Finesse installation to dedicated sub-customer instances, you can use a local DNS server or shared DNS. For more information, see the section on creating DNS servers for Cisco Finesse in SCC deployments in the *Installing and Configuring Cisco HCS for Contact Center Guide*.

- The shared components sub-customer option can support 100 sub-customers on each Unified CM cluster and a maximum of 200 sub-customers per SCC. The 4000 Agents Reference Design uses a single Unified CM cluster for up to 4000 agents. Splitting this cluster in two requires application of the Oversubscription Resource Provisioning policy to account for the extra Unified CM Publisher VM.

Small Contact Center Deployment Considerations

Table 1: Shared Management and Aggregation Components

Components	Design Considerations
Unified Contact Center Domain Manager	Parameters moved to respective folders by administrator. System Configuration limits enforced at solution level, not at sub-customer level. The service provider configures the Outbound configuration and administration for each sub-customer.
	ISE users have these options: • CCDM domain users • CCE domain users • Sub-customer domain users **Note** Single Sign-On does not support ISE users.
Cisco Unified Communications Domain Manager	In **Network** > **Contact Center Server**, add a dummy CVP Server for each sub-customer. Associate the same CVP server in the sub-customer hardware group.
	Agent Extension across sub-customer must be unique. Overlapping of agent extension or dial plan is not supported. Example: If sub_cust1 uses 801xxxxxx extension, sub_cust2 cannot use the same extension.
	Each sub-customer must have a unique internal help desk number.
Session Border Controller	This SBC provides for SIP signaling and media aggregation ingress and egress to the PSTN. For more details on the aggregation SBC, see http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/hcs/11_5/HCS_Solution/Flexibility/chcs_b_hcs-115-flexibility-guide.html.
ASA/NAT	All data traffic to and from sub-customers passes through the ASA. The ASA uses NAT for dedicated sub-customers with overlapping IP subnets. ASA is required for shared and dedicated sub-customers. Do not enable SIP ALG in ASA.
Cisco Prime Collaboration Assurance	Static mapping of internal IP to an external IP is required for Prime to work with SCC.
Microsoft Active Directory	Used for SCC administration, and hosted or customer domain (through trust) for AD user authentication.
Microsoft AD FS 2012 R2	Required for Single Sign-On. Provides for hosted domain or federated trust to customer IdPs for user authentication.

Table 2: Shared Components

Components	Design Considerations
Unified CCE Router	
Logger	System Configuration limits enforced at solution level, not at sub-customer level.
AW-HDS-DDS	
VRU Peripheral Gateways	
Unified CVP Call Server	Dialed number patterns across sub-customers must be unique. Example: If sub_cust1 uses 801xxxxxx dial number pattern, sub_cust2 cannot use the same dial number pattern.
CVP Reporting Server	Use Exony VIM for multi tenant reporting.
Cisco Unified Intelligence Center	Unified Intelligence Center is used for simple collections using the department ID of Unified CCE. You can also use Exony VIM for multi-tenant reporting.
CUBE- Enterprise	In addition to standard comprehensive call treatment and survivability for the SCC deployment, the CUBE Enterprise multi-VRF feature is required to support SIP adjacency for the dedicated sub-customer PG option with overlapping IP subnets.

Table 3: Dedicated Sub-Customer Components

Components	Design Considerations
Cisco Unified CM	Dedicated sub-customer options require the use of Unified CM software-based resources, unless a dedicated gateway in the customer context provides the resources.
Peripheral Gateways	Follow any of these domain considerations to configure peripheral gateway: • PG can install on sub-customer domain. Both sub-customer domain and service provider (UCCE) domain instance number and name should be same. • Configure static NAT between UCCE domain and PG machine that is installed on service provider (UCCE) domain. • The SCC can only enable Precision Routing and Live Data if it has 12 or fewer Agent PGs.

Components	Design Considerations
Cisco Finesse	Each dedicated sub-customer should have local DNS.

Table 4: Optional Components

Components	Design considerations
Enterprise Chat and Email	Enterprise Chat and Email may be deployed per sub-customer, not exceeding 50 sub-customers. **Note** Shared sub-customer Components option is not supported.
Cisco MediaSense	SCC supports a single MediaSense server for each dedicated sub-customer. Only Dial-peer forking is supported.
	Do not enable a Media classes on the common outbound dial-peer. Create an Inbound Dial-peer for each sub-customer and enable the Media class there. **Note** Shared sub-customer Components option is not supported.
SPAN Based Monitoring	Span from CUBE is supported for Mobile Agents.
SocialMiner	Not supported for Shared components sub-customer option. Dedicated sub-customers can deploy SocialMiner as dedicated within the customer context without Agent Request or callback.

Table 5: Core Features

Components	Design considerations
Agent Greeting	
Whisper Announcement	
Courtesy Call Back	
Outbound Dialer	Maximum of 32 Dialers are supported and Maximum 4000 ports are supported. **Note** There is no solution for sub-customers to manage outbound campaigns. Provide services or custom solutions to manage outbound campaigns for each sub-customer.
Mobile Agents	

Components	Design considerations
A-law and mu-law support	
Post Call Survey	
Application Gateway	Not supported in Small Contact Center.
Database Integration	ICM DB lookup is not supported.
Local Trunk PSTN Local Breakout	
Local Trunk Location based CAC	Not supported for dedicated components sub-customer option.
Unified CM-based Silent Monitoring	
Context Service	Not supported
Task Routing	The Task Routing API does not provide for multi-tenant interface to the SCC.
Precision Routing	Enabling Precision Routing on SCC limits the deployment to a maximum of 12 Agent PGs.
Single Sign-On	SCC uses a single IdS registered to the hosted AD FS 2012 R2 IdP for all customer authentication. All SSO Agents and Supervisor sign-in names must be in Email (UPN) format.

Figure 1: Cisco HCS Small Contact Center Deployment Topology