

Service Description for IPCC Implementation

Issue 1.0
Date 2012-11-01



Contents

1 Service Overview	3
1.1 Service Architecture	4
2 Service Description.....	5
2.1 Hardware Installation	5
2.2 Software Commissioning	7
2.3 Engineering Service	13
2.3.1 Project Management	13
2.3.2 Site Survey	15
2.3.3 Engineering Design.....	16
2.3.4 Hardware Installation.....	17
2.3.5 Software Commissioning	19
2.3.6 IOT.....	22
2.3.7 Acceptance Testing.....	23
2.4 Supervision Commissioning Service.....	25
2.4.1 Hardware Supervision.....	26
2.4.2 Software Commissioning	27
2.4.3 IOT.....	30
2.4.4 Acceptance Testing.....	31
2.5 One-off Support Service.....	33
3 Acronyms and Abbreviations.....	34

1 Service Overview

IPCC implementation service, which targets the whole IPCC system or individual components such as UAP, CTI, AGENT, etc, can be either packaged into three different service packages including engineering service package, supervision commissioning service package and one-off service package, or be offered in the form of two separate services consisting of hardware installation service, software commissioning service.

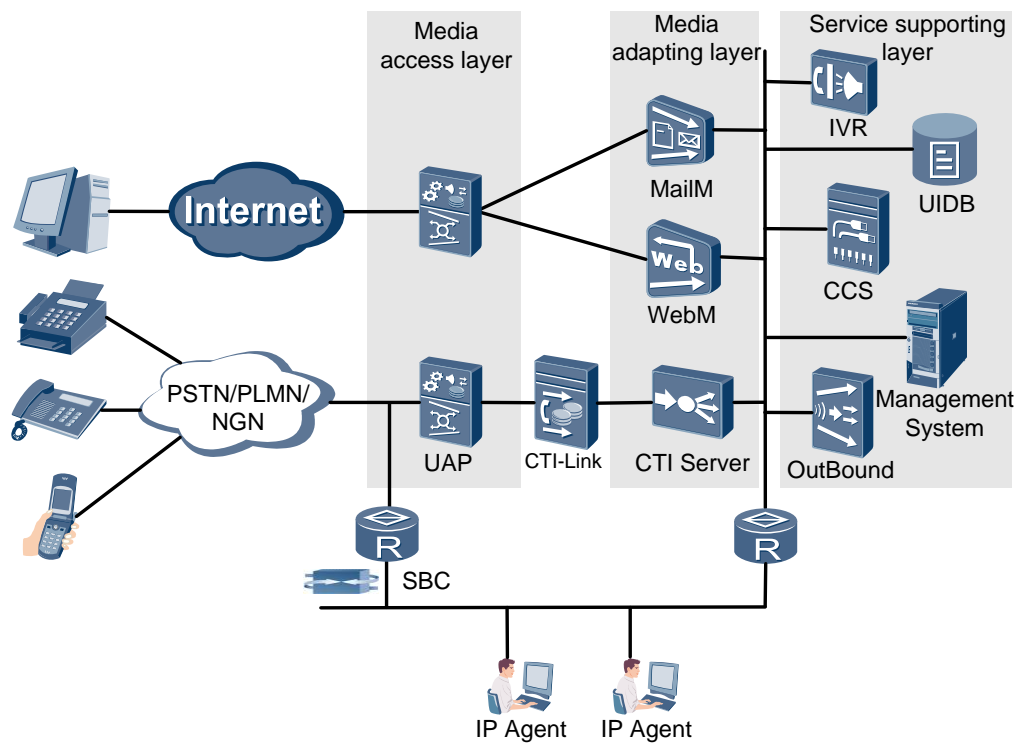


Figure 1-1: Architecture of the Huawei IPCC

1.1 Service Architecture

Huawei has a wealth of system implementation service experience and hence can provide customers with high quality system implementation service. The diagram below shows the various services and packages that can be parts of the IPCC implementation service.

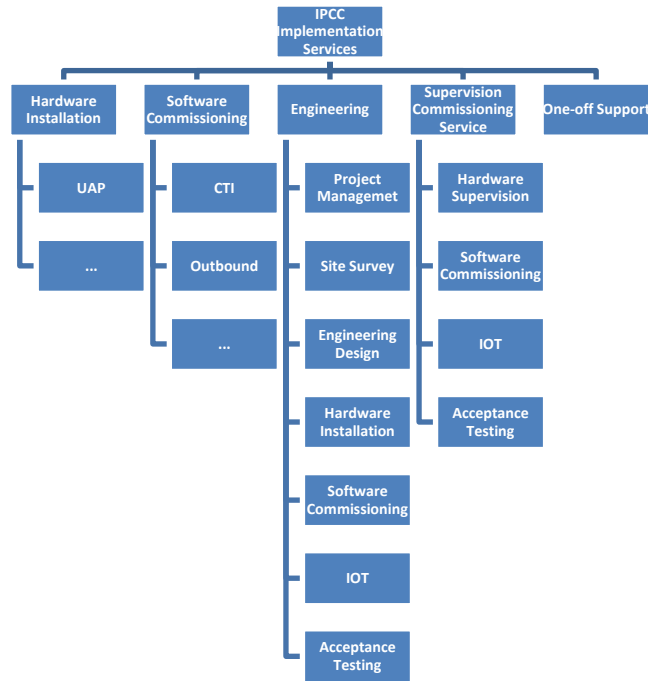


Figure 1-2: Architecture of the Implementation Service

2 Service Description

2.1 Hardware Installation

Definition

Hardware installation is to install the equipments and power them up. The equipments include the main equipments and all the other ancillary materials shipped with the master equipment.

Content

The following table lists details of the hardware installation service.

Service Product	Service Module	Description
Hardware installation	U2990/UAP3300 installation	Cabinet installation(on condition that the cabinet is provided by Huawei) in accordance with Huawei engineering specifications and design documents
		Sub rack installation in accordance with the Huawei engineering specifications and design documents
		Board installation or adjustment according to the planned board layout
	Cable installation	Connecting the main equipment and its ancillary equipments using interconnecting cables and fibers
		Power cable installation
		Cabling adjustment of main equipment and its ancillary equipments to adapt to different installation conditions that may be involved
	Hardware self-check and power-on	Complete the quality checklist for quality inspection of the equipments that have been installed completely and if any of the criteria is not met then do the necessary rectification. Verify that the hardware is correctly installed and power-on, and ensure that all the indicators are normal.

Deliverables

Module	Activities	Documents
Pre-installation preparation	Installation tool preparation and site readiness confirmation	<i>Site Readiness Checklist</i>
Unpacking inspection	Take the goods out of the box and verify the inventory against the BOM	BOM list signed by the customer
Equipment installation	Installation of the rack and sub rack	-
Cabling	Connect the cables and pigtails to the equipments and make sure that the interconnections between the HUAWEI equipment are proper	-
Hardware self-check	Post installation of the equipments do a self test of the hardware equipments	<i>Installation Quality Check Report</i>
Power-on	Power-on preparation and power-on status check	<i>Project Hardware Installation Completion Report, Engineering Memo</i>

Responsibility Matrix

No.	Service Activities	Huawei	Customer
1	Equipment supply	R	S
2	Provision of trunk cables and connectors	S	R
3	HUAWEI equipments' Cable installation	R	S
4	Unpacking inspection	R	R
5	Confirmation on the packing list with signature	R	R
6	Hardware self-check	R	-
7	Output of hardware-related documents	R	-

Note:

The entity responsible can be identified as "R" and there can only be one party responsible;

If both the customer and Huawei are responsible then mark both as "R";

The party who has to provide the information or be informed is identified as "I";

The party who will play a support role is identified as “S”;

This will apply to all the following sections unless otherwise stated and agreed.

2.2 Software Commissioning

Definition

Software commissioning is to perform software adaptation, configuration and debugging to ensure that the equipment is operational. The software commissioning service primarily covers the following:

- Preparation of system design documents.
- Preparation of commissioning data, tools and instruments.
- Software version and license application and installation.
- Configuration data loading.
- Perform software self-check.
- Interoperability testing of the internal components.

Content

Service Product	Service Module	Description
Software commissioning	UAP commissioning(optional)	Host software loading
		Configuration following UAP configuration instructions and system design documents
		License loading
		Do a software self-check by following <i>UAPXXXX Quality Check Standard</i> to ensure the accuracy and integrity of software commissioning
		Basic UAP knowledge onsite training
		Basic UAP functional test
	CTI commissioning(optional)	Check and confirm OS and DB are ready for CTI installation
		Installation of UIDB, public components(ICDCOMM, MDS, NetCheck, chkCTI), core service components(CCS, CTI Server, configuration server), ApLogic, CTI-Link, WAS, etc.

Service Product	Service Module	Description
		CTI basic configuration following ICD installation and configuration instructions and system design documents
		License loading
		Do a CTI software self-check by following <i>ICD3.0 Quality Check Standard</i> to ensure the accuracy and integrity of software commissioning
		Basic CTI knowledge onsite training
		Basic CTI function test like, service start, switch, etc (excluding agent, IVR, OUTBOUND).
	IVR commissioning(optional)	Check and confirm that: 1. OS and DB for IVR are ready 2. Commissioning of CTI core services and ASR/TTS service (if needed) is complete.
		Software installation including IVR, FileSyn, etc.
		Configure IVR according to the <i>ICD Installation and Configuration Guide Documents and System Design Documents</i>
		Commission with core server and TTS/ASR server
		Do an IVR software self-check by following <i>ICD3.0 Quality Check Standard</i> to ensure the accuracy and integrity of software commissioning
		Basic IVR knowledge onsite training
		Test basic IVR functions with test flow.
	AGENT Frame commissioning(optional)	Check and confirm that: 1. OS and DB for AGENT are ready 2. Commissioning of CTI core services, mail server and short message service gateway is complete.

Service Product	Service Module	Description
		Software installation including MCP, WAS, MSP, Change Server(if fax agent and short message agent are needed), etc.
		Configure agents such as voice agent and fax agent on the server side according to the <i>ICD Installation and Configuration Guide Documents</i> and <i>System Design Documents</i>
		License loading
		Do an agent server software self-check by following <i>ICD3.0 Quality Check Standard</i> to ensure the accuracy and integrity of software commissioning
		Basic AGENT knowledge onsite training
		Testing and commissioning of basic AGENT functions
	NIRC commissioning(optional)	Check and confirm that: 1. OS and DB for NIRC are ready 2. Commissioning of CTI core services and AGENT Frame service is complete.
		NIRC software installation
		Commission with core servers
		Configure NIRC according to the <i>ICD Installation and Configuration Guide Documents</i> and <i>System Design Documents</i>
		License loading
		Do a NIRC self-check by following <i>ICD3.0 Quality Check Standard</i> to ensure the accuracy and integrity of software commissioning
		Basic NIRC knowledge onsite training
		Testing of basic NIRC functions

Service Product	Service Module	Description
	OUTBOUND commissioning(optional)	Check and confirm that: 1. OS and DB for OUTBOUND are ready 2. Commissioning of CTI core services and AGENT Frame service is complete.
		Software installation including OBS and outbound call DB.
		Configure OUTBOUND according to the <i>ICD Installation and Configuration Guide Documents</i> and <i>System Design Documents</i>
		License loading
		Do an OUTBOUND software self-check by following <i>ICD3.0 Quality Check Standard</i> to ensure the accuracy and integrity of software commissioning
		Basic OUTBOUND knowledge onsite training
		Testing of basic OUTBOUND functions
	Recording and monitoring commissioning(optional)	Check and confirm that: 1. OS and DB for recording and monitoring are ready 2. Commissioning of CTI core services and AGENT Frame service is complete.
		Software installation including RMS, recording server
		Configure recording and monitoring services according to the <i>ICD Installation and Configuration Guide Documents</i> and <i>System Design Documents</i>
		License loading
		Do a recording and monitoring software self-check by following <i>ICD3.0 Quality Check Standard</i> to ensure the accuracy and integrity of software commissioning

Service Product	Service Module	Description
		Basic recording and monitoring knowledge onsite training
		Testing of basic recording and monitoring functions
	Report commissioning(optional)	Check and confirm OS and DB are ready for report system installation
		CDR storage and report software installation
		Configure CDR storage and report according to the <i>Report Installation and Configuration Guide Documents</i> and <i>System Design Documents</i>
		License loading
		Do a report software self-check by following <i>ICD3.0 Quality Check Standard</i> to ensure the accuracy and integrity of software commissioning
		Basic CDR storage and report knowledge onsite training
		Testing of basic CDR storage and report functions
	AGENT commissioning(optional)	Check and confirm OS and DB are ready for Softphone
		Installation of Softphone and loading or upgrade for IPPHONE and IAD software
		Commission Softphone, IPPHONE and IAD according to their respective <i>Installation and Configuration Guide Documents</i> and <i>System Design Documents</i>
		License loading
		Basic Softphone, IPPHONE and IAD knowledge onsite training
		Testing of basic Softphone, IPPHONE and IAD functions

Service Product	Service Module	Description
	Interoperability test of the internal components	If only a part of the whole system is in Huawei scope then complete the installation and commissioning of only those components, and support the integration with other systems if required and in scope.

Deliverables

No.	Activities	Documents
1	Software version and license application	Software version and license
2	System commissioning	-
3	License loading	-
4	Software self-check	<i>Self-check Report</i> (optional)
5	Basic software knowledge training	<i>Training Report</i> (optional)
6	Testing of basic software functions	<i>Test Report</i>
7	Interoperability test of the internal components	<i>Self-check Report</i> (optional)

Responsibility Matrix

No.	Service Activities	Huawei	Customer
1	Preparation of server, OS and DB for software installation	-	R
2	Software version and license application and verification	R	-
3	System commissioning including license loading	R	S
4	Software self-check	R	S
5	Basic software knowledge training	R	S
6	Testing of basic software functions	R	S

2.3 Engineering Service

The engineering service includes seven components namely, project management, site survey, engineering design, hardware installation, software commissioning, IOT(interoperability testing) and acceptance testing.

The engineering service of Huawei relies very heavily on the extensive engineering experience that Huawei has gained over long period of time by implementing projects across the globe to many customers in varying geographies. The engineering service takes care of the hardware and software installation, commissioning, debugging etc...and ensures that the projects are managed in a global manner to facilitate a smooth and quick completion.

2.3.1 Project Management

Definition

Project Management will be carried out in such a way that it meets the customer demands. This will be carried out based on the project management processes of PMP, EPC and general standards. The entire project implementation will be monitored and managed to ensure the quality of the project deliverables and also to ensure that the project is completed according to the project plan.

Content

Service Product	Service Module	Description	
Project management	Quality management	Project engineering quality management	
	Progress management	Project timetable management	
	Communication management	Supplier-communication	
		Subcontractor-communication	
		Customer communication	
	Cost management	Purchase cost	
		Labor cost	
	Scope management	Scope management	
	Technology management	Technology management	
	Risk management	Risk management	
Customer satisfaction management	Project service satisfaction management		

- **Quality management:** Quality planning, quality assurance, quality control and completion of the project's quality assessment.
- **Progress management:** Effort and duration estimates, preparation of the schedule, monitoring and tracking the project schedule, and controlling the implementation of the project.

- **Communication management:** Establish a protocol for communication between the different stake holders in a project including the suppliers and subcontractors. Effectively manage the different entities by ensuring a proper communication mechanism is in place. Communicate with customers about project implementation and engineering progress.
- **Cost management:** Properly estimate the purchase and implementation costs and monitor the project cost accounting to ensure that the implementation service cost remains at an appropriate level.
- **Scope management:** Manage the project scope based on Huawei rich engineering experience
- **Technology management:** Manage technology related challenges relying on Huawei technology platform and the availability of Huawei experts who provide remote supports.
- **Risk management:** All the risks are identified very early and in a timely manner so as to mitigate those risks and complete the project as per the plan.
- **Customer satisfaction management:** To be in constant touch with the customer and communicating with the customer on a regular basis on the progress of the project, coordinating with the customer for any customer dependencies related to the project and completing the project to the highest satisfaction of the customer.

Deliverables

Module	Activities	Documents
Quality management	Quality planning, quality assurance and control	<i>Project quality assessment report</i>
Progress management	Effort and duration estimates, project planning and tracking	
Communication management	Supplier management	<i>Experience Summary Report</i>
	Subcontractor management	
	Customer communication	
Cost management	Procurement cost estimates and decision-making	
	Manpower planning, team building	
Scope management	Ensure the scope is signed off, ensure all the agreed deliverables are delivered	
Technical management	Manage and control the technical part of a project	
Risk management	Identify and highlight all the risks from time to time	
Customer satisfaction management	Sharing project update on a regular basis with the customers	

Responsibility Matrix

No.	Service Activities	Huawei	Customer
1	Quality management	R	S
2	Progress management	R	S
3	Communication management	R	S
4	Cost management	R	S
5	Scope management	R	S
6	Technology management	R	S
7	Risk management	R	S
8	Customer satisfaction management	R	S

2.3.2 Site Survey

Definition

A site survey is to check the condition of the site (including interior layout, power supply and cabling) based on the equipment configuration list.

Content

The site survey content varies with products.

Service Product	Service Module	Description
Site survey	Site survey	Survey of equipment layout
		Survey of the power supply to equipment
		Survey of the equipment monitoring system
		Cabling survey

- Survey of equipment layout:** Surveying the equipment room, including indoor and outdoor environment, the structure and size, the existing equipment distribution and customer ancillary facilities (example: power, ground bar, air conditioning, alignment of rack and availability of raised floor), to ensure that the equipment can be mounted and installed properly in the equipment room.
- Survey of the power supply to equipment:** Surveying the equipment room to make sure that power supply available in the equipment room is sufficient to meet the requirement of the new solution that is going to be deployed.
- Survey of the equipment monitoring system:** This would cover surveying the equipment room for the proper air conditioning (temperature), humidity, smoke detectors, controlled access to the data center, susceptibility to flooding, main power switch

etc... This will ensure that the equipments are placed and operating in a monitored environment.

- **Cabling survey:** This would cover surveying the cable routing, relay cable and interface type, non-standard placed cabinet cascade cable, external cable, cabling rack and DDF/ODF provided by Huawei.

Deliverables

Module	Activities	Documents
Site survey	Survey of equipment layout	<i>Survey Report, Dispatch Materials Confirmation Report.</i>
	Survey of the power supply to equipment	
	Survey of the equipment monitoring system	
	Cabling survey	

Responsibility Matrix

No.	Service Activities	Huawei	Customer
1	Coordination for site survey	S	R
2	Survey preparation and site access	S	R
3	Equipment room environmental parameters confirmation	S	R
4	Installation environment related data acquisition	R	S
5	Site survey result and memorandum of understanding (MOU)	S	R

2.3.3 Engineering Design

Definition

Engineering design covers preparing an implementation design based on the survey report. This design will include the design drawing and specifications on the interior layout, power, rack and network. The design document will be the reference guide for all the equipment installation related activities.

Content

The engineering design content varies with products.

Service Product	Service Module	Description
Engineering design	Engineering design	Equipment layout design
		Cabling design
		Equipment power calculation

- **Equipment layout design:** Work out equipment room layout diagram, power port usage diagram, and DDF/ODF/MDF port usage diagram to ensure that the project is implemented according to the design.
- **Cabling design:** Provide cabling diagram for the equipment room, ground bar usage diagram, internal cable connection table for equipment, and external cable connection table for the equipment to ensure that the standard design and construction norms are adhered to.
- **Equipment power calculation:** The power consumption table showing the power requirement of each component will help in understanding if the power supply system in the equipment room has enough power to meet the overall system requirements.

Deliverables

Module	Activities	Documents
Engineering design	Equipment layout design	<i>Equipment Room Layout Diagrams, Power Consumption Tables and Huawei equipments' cable Connection Tables.</i>
	Cabling design	
	Equipment power calculation	

Responsibility Matrix

No.	Service Activities	Huawei	Customer
1	Power supply access	S	R
2	Ground system	S	R
3	Equipment layout design	R	S
4	Cabling design	R	S

2.3.4 Hardware Installation

Definition

Hardware installation is to install the equipments and power them up. The equipments include the main equipments and all the other ancillary materials shipped with the master equipment.

Content

The following table lists details of the hardware installation service.

Service Product	Service Module	Description
Hardware installation	U2990/UAP3300 installation	Cabinet installation(on condition that the cabinet is provided by Huawei) in accordance with Huawei engineering specifications and design documents
		Sub rack installation in accordance with the Huawei engineering specifications and design documents(provided by customer)
		Board installation or adjustment according to the planned board layout
	Server and storage installation	Ensure that servers and storages are in place according to the Huawei engineering specifications and design documents (provided by customer)
	Cable installation	Connecting the main Huawei equipment and its ancillary equipments using interconnecting cables and fibers
		Cabling adjustment of main equipment and its ancillary equipments to adapt to different installation conditions that may be involved
	Hardware self-check and power-on	Complete the quality checklist for quality inspection of the equipments that have been installed completely and if any of the criteria is not met then do the necessary rectification. Verify that the hardware is correctly installed and power-on, and ensure that all the indicators are normal.

Deliverables

Module	Activities	Documents
Pre-installation preparation	Installation tool preparation and site readiness confirmation	<i>Site Readiness Checklist</i>
Unpacking inspection	Take the goods out of the box and verify the inventory against the BOM	BOM list signed by the customer
Equipment installation	Installation of the rack and sub rack	-
Cabling	Connect the cables and pigtails to the equipments and make sure that the interconnections between the Huawei's equipment	-

Module	Activities	Documents
Hardware self-check	Post installation of the equipments do a self test of the hardware equipments	<i>Installation Quality Check Report</i>
Power-on	Power-on preparation and power-on status check	<i>Project Hardware Installation Completion Report, Engineering Memo</i>

Responsibility Matrix

No.	Service Activities	Huawei	Customer
1	Equipment supply	R	S
2	Installation of cabinets(except cabinets provided by customer) and sub racks	R	S
3	Trunk andPower cables installation	R	S
4	Unpacking inspection	R	R
5	Confirmation on the packing list with signature	R	R
6	Hardware self-check	R	-
7	Output of hardware-related documents	R	-

2.3.5 Software Commissioning

Definition

Software commissioning is to perform software adaptation, configuration and debugging to ensure that the equipment is operational. The software commissioning service primarily covers the following:

- Preparation of system design documents.
- Preparation of commissioning data
- Software version and license application and installation.
- Configuration data loading.
- Perform software self-check.
- Commissioning of the relevant components.

Content

Service Product	Service Module	Description
Software commissioning	UAP commissioning	Host software loading
		Configuration following UAP configuration instructions and system design documents(provided by customer)
		Do a UAP software self-check by following <i>UAPXXXX Quality Check Standard</i> to ensure the accuracy and integrity of software commissioning
	OS and DB installation	Install Windows or Linux by following system design documents(provided by customer)
		Install SQLSERVER or ORACLE by following system design documents(provided by customer)
	Call center platform installation	Installation of UIDB, public components(ICDCOMM, MDS, NetCheck, chkCTI), core service components(CCS, CTI Server, configuration server), ApLogic, CTI-Link, IVR, WAS, etc.
	Basic information configuration	Check and confirm that: 1. OS and DB for IVR are ready 2. Commissioning of CTI core services and ASR/TTS service (if needed) is complete.
	License loading	License loading post application
	Business commissioning(items selecting according to design document provided by customer)	Manual station
		Automatic voice
		WECC
		Multimedia service including mail service, fax service and short message service
		VMS
Outbound call		
Terminal services: IPPHONE, IAD and SoftPhone		

Service Product	Service Module	Description
		Huawei VOIP mirroring voice recording service
		Huawei screen recording service
		Video service
		Quality inspection and monitoring service
		Network call center service
		Commission Softphone, IPPHONE and IAD according to their respective <i>Installation and Configuration Guide Documents</i> and <i>System Design Documents</i>
	CDR storage commissioning	
	Interoperability test of the internal components	If only a part of the whole system is in Huawei scope then complete the installation and commissioning of only those components, and support the integration with other systems if required and in scope.
	System test	Do an IVR software self-check by following <i>ICD3.0 Quality Check Standard</i> to ensure the accuracy and integrity of software commissioning

Deliverables

No.	Activities	Documents
1	Software version and license application and verification	Software version and license
2	System commissioning	-
3	License loading	-
4	Software self-check	<i>Self-check Report</i> (optional)

Responsibility Matrix

No.	Service Activities	Huawei	Customer
1	Software version and license application and verification	R	-
2	Software adaption	R	-

No.	Service Activities	Huawei	Customer
3	System commissioning including license loading	R	S
4	Software self-check	R	S

2.3.6 IOT

Definition

IOT is to test the interoperability between interfaces of different pieces of equipment; the interoperability will involve network, protocol, service etc...

Content

Service Product	Service Module	Description
IOT	Interoperability test of the internal components	If only a part of the whole system is in Huawei scope then complete the installation and commissioning of only those components, and support the integration with other systems if required and in scope.
	Third party recording system interoperability testing (Witness, Yugao, etc.)	Check and confirm the commissioning for the third party recording system is complete
		Commissioning of network connectivity with third party recording system
		RMS installation
		Commission recording system according to <i>ICD Installation and Configuration Guide Documents</i> and <i>System Design Documents</i> (provided by customer)
		License loading
		Basic recording system knowledge onsite training(excluding the functions of third party system)
		Testing of basic recording system functions(excluding the functions of third party system)

Deliverables

No.	Activities	Documents
1	Commissioning with third party system	Configuration files
2	Software self-check	<i>Self-check Report</i> (optional)

Responsibility Matrix

No.	Service Activities	Huawei	Customer
1	Completion of third party software installation and commissioning	-	R
2	Commissioning with third party system	R	R
3	Software self-check	R	S

2.3.7 Acceptance Testing

Definition

Acceptance testing covers testing of the equipments that have been sold and delivered. This testing ensures that the equipment meets the basic operation and maintenance requirements, bears the customer service and will be able to run at the customer's site with long term stability.

Content

Service Product	Service Module	Description
Acceptance testing	Hardware functional acceptance testing	This testing is performed by a third party authorized by the customer or the client. This testing takes care of the basic functional testing of the equipment and also checks for the number and type of the equipment delivered in conformance with the contract. The test also makes sure that the redundancy and the survivability features are working

Service Product	Service Module	Description
	Software functional acceptance testing	This is performed by a third party authorized by the customer or client. The testing focuses on testing the software function and licensing mechanism. The testing would give an assurance that the software functions as per the specifications and meets the basic customer requirements in terms of the operations, maintenance, software redundancy and providing performance statistics.
	Acceptance document and report	This includes the test cases with the description of the test scenarios, prerequisites for each test case, expected result for the test case and the exit or the acceptance criteria for the test case. This also includes the table with the names of the people who can authorize or sign off on the test cases.

Deliverables

No.	Activities	Documents
1	Test Case Design	<i>Acceptance Manual</i>
2	Tools preparation	-
3	Hardware functionality acceptance	-
4	Software functionality acceptance	-
5	Problems processing	-
6	Sign test results to confirm	<i>Acceptance Manual, Signature Form</i>
7	Acceptance document	<i>Acceptance Report, Acceptance Manual and Signature Form</i>

- **Test Case Design:** Test cases design based on the customer needs and operating environment.
- **Tools preparation:** Coordination with the team from the customer end who are required to prepare the acceptance test tools, test terminals etc..., for example: test card, measuring instrument, test terminal etc...
- **Hardware functionality acceptance:** Perform the testing with the test cases affirmed by customer or third party authorized by the customer, and confirm on the basic functioning of the equipment hardware.

- **Software functionality acceptance:** Perform the testing with the test cases affirmed by customer or third party authorized by the customer, and confirm on the basic functioning of the equipment software.
- **Problems processing:** All the failed test cases are followed up with the required remedial action to close the problem
- **Sign test results to confirm:** Sign off on the test cases with the client or the customer authorized third party after performing the test.
- **Acceptance document:** This document contains the test cases with a detailed description of the scenario, the prerequisites for the test case execution, the expected test results, the acceptance criteria and the sign off table consisting of names of people who are authorized to sign off on the test cases.

Responsibility Matrix

No.	Service Activities	Huawei	Customer
1	Tools preparation	S	R
2	Acceptance application	R	-
3	Defining of acceptance criteria, test items, and fault classification	R	R
4	Acceptance test based on the acceptance criteria agreed on by both parties	S	R
5	Confirmation on the acceptance result with signature	R	R
6	Output of acceptance documents	R	S

2.4 Supervision Commissioning Service

This includes software commissioning activities and technical guidance for hardware installation in case of any challenges faced. To be able to fix all the technical problems and provide answers to the questions that might arise during hardware installation, to ensure that all the installed equipments are functioning as expected, to complete the audit of the quality checklist for the installation and to support the construction workers to be able to complete all the activities correctly and in time.

Supervision commissioning service includes hardware supervision, software commissioning, IOT and acceptance testing.

2.4.1 Hardware Supervision

Definition

Hardware Supervision service provides technical guidance in the process of equipment installation. Answers all the questions that come up during engineering activities related to the products. Guide the construction workers to properly work towards a quick and timely completion of all the tasks.

Content

Service Product	Service Module	Description	
Hardware supervision	Unpacking inspection	Provide guidance in the process of unpacking	
	Technical guidance on hardware installation	Provide the required training to the people involved in hardware installation and guide them in various scenarios to complete the task	
	Guidance in case of hardware installation problems		Provide the necessary on-site supervision
			Provide necessary technical support to the hardware personnel and responding to their technical inquiries
			Report any problem pertaining to the hardware delivery or the goods delivered
	Hardware installation quality inspection and guidance		Coordinate with the respective teams in case of damage to the goods during the installation
			Resolving of other technical issues related to hardware installation
		Provide guidance on the hardware installation quality checks and share the quality standards documents that can be referred when needed	

- **Unpacking inspection:** Guide the hardware installation team to unpack and inspect the goods. To confirm along with the customer regarding the goods that have arrived and resolve any issues related to the goods.

- **Technical guidance on hardware installation:** To be able to answer the questions related to the hardware installation process, including phone support or site support to carry out the installation specific to the customer as per the agreement.
- **Guidance in case of hardware installation problems:** To guide and handle the problems relating to the hardware installation process or the materials shipped not meeting the quality requirement and offer solution to the stated problem.
- **Hardware installation quality inspection and guidance:** Provide guidance on the hardware installation and quality check process and ensure that the quality of hardware installation meets the customer requirements.

**NOTE**

1. The hardware supervision service only provides technical support and does not cover detailed hardware installation operations and activities.
2. The hardware supervision service and the hardware installation service must not be provided simultaneously.
3. The engineering service does not contain any supervision service. The Supervision commissioning service only provides the hardware supervision service.

2.4.2 Software Commissioning

Definition

Software commissioning is to perform software adaptation, configuration and debugging to ensure that the equipment is operational. The software commissioning service primarily covers the following:

- Preparation of system design documents.
- Preparation of commissioning data, tools and instruments.
- Software version and license application and installation.
- Configuration data loading.
- Perform software self-check.
- Commissioning of the relevant components.

Content

Service Product	Service Module	Description
Software commissioning	UAP commissioning	Host software loading
		Configuration following UAP configuration instructions and system design documents(provided by customer)
		Do a UAP software self-check by following <i>UAPXXXX Quality Check Standard</i> to ensure the accuracy and integrity of software commissioning

Service Product	Service Module	Description
	OS and DB installation	Install Windows or Linux by following system design documents(provided by customer)
		Install SQLSERVER or ORACLE by following system design documents(provided by customer)
	Call center platform installation	Installation of UIDB, public components(ICDCOMM, MDS, NetCheck, chkCTI), core service components(CCS, CTI Server, configuration server), ApLogic, CTI-Link, IVR, WAS, etc.
	Basic information configuration	Check and confirm that: 1. OS and DB for IVR are ready 2. Commissioning of CTI core services and ASR/TTS service (if needed) is complete.
	License loading	License loading post application
	Business commissioning(items selecting according to design document provided by customer)	Manual station
		Automatic voice
		WECC
		Multimedia service including mail service, fax service and short message service
		VMS
		Outbound call
		Terminal services: IPPHONE, IAD and SoftPhone
		Huawei VOIP mirroring voice recording service
		Huawei screen recording service
Video service		
Quality inspection and monitoring service		
Network call center service		

Service Product	Service Module	Description
		Commission Softphone, IPPHONE and IAD according to their respective <i>Installation and Configuration Guide Documents</i> and <i>System Design Documents</i>
		CDR storage commissioning
	Interoperability test of the internal components	If only a part of the whole system is in Huawei scope then complete the installation and commissioning of only those components, and support the integration with other systems if required and in scope.
	System test	Do an IVR software self-check by following <i>ICD3.0 Quality Check Standard</i> to ensure the accuracy and integrity of software commissioning

Deliverables

No.	Activities	Documents
1	Software version and license application and verification	Software version and license
2	System commissioning	-
3	License loading	-
4	Software self-check	<i>Self-check Report</i> (optional)

Responsibility Matrix

No.	Service Activities	Huawei	Customer
1	Software version and license application and verification	R	-
2	Software adaption	R	-
3	System commissioning including license loading	R	S
4	Software self-check	R	S

2.4.3 IOT

Definition

IOT is to test the interoperability between interfaces of different pieces of equipment; the interoperability will involve network, protocol, service etc...

Content

Service Product	Service Module	Description
IOT	Interoperability test of the internal components	If only a part of the whole system is in Huawei scope then complete the installation and commissioning of only those components, and support the integration with other systems if required and in scope.
	Third party recording system interoperability testing (Witness, Yugao, etc.)	Check and confirm the commissioning for the third party recording system is complete
		Commissioning of network connectivity with third party recording system
		RMS installation
		Commission recording system according to <i>ICD Installation and Configuration Guide Documents</i> and <i>System Design Documents</i> (provided by customer)
		License loading
		Basic recording system knowledge onsite training(excluding the functions of third party system)
		Testing of basic recording system functions(excluding the functions of third party system)

Deliverables

No.	Activities	Documents
1	Commissioning with third party system	Configuration files
2	Software self-check	<i>Self-check Report</i> (optional)

Responsibility Matrix

No.	Service Activities	Huawei	Customer
1	Completion of third party software installation and commissioning	-	R
2	Commissioning with third party system	R	R
3	Software self-check	R	S

2.4.4 Acceptance Testing

Definition

Acceptance testing covers testing of the equipments that have been sold and delivered. This testing ensures that the equipment meets the basic operation and maintenance requirements, bears the customer service and will be able to run at the customer's site with long term stability.

Content

Service Product	Service Module	Description
Acceptance testing	Hardware functional acceptance testing	This testing is performed by a third party authorized by the customer or the client. This testing takes care of the basic functional testing of the equipment and also checks for the number and type of the equipment delivered in conformance with the contract. The test also makes sure that the redundancy and the survivability features are working
	Software functional acceptance testing	This is performed by a third party authorized by the customer or client. The testing focuses on testing the software function and licensing mechanism. The testing would give an assurance that the software functions as per the specifications and meets the basic customer requirements in terms of the operations, maintenance, software redundancy and providing performance statistics.

Service Product	Service Module	Description
	Acceptance document and report	This includes the test cases with the description of the test scenarios, prerequisites for each test case, expected result for the test case and the exit or the acceptance criteria for the test case. This also includes the table with the names of the people who can authorize or sign off on the test cases.

Deliverables

No.	Activities	Documents
1	Test Case Design	<i>Acceptance Manual</i>
2	Tools preparation	-
3	Hardware functionality acceptance	-
4	Software functionality acceptance	-
5	Problems processing	-
6	Sign test results to confirm	<i>Acceptance Manual, Signature Form</i>
7	Acceptance document	<i>Acceptance Report, Acceptance Manual and Signature Form</i>

- **Test Case Design:** Test cases design based on the customer needs and operating environment.
- **Tools preparation:** Coordination with the team from the customer end who are required to prepare the acceptance test tools, test terminals etc..., for example: test card, measuring instrument, test terminal etc...
- **Hardware functionality acceptance:** Perform the testing with the test cases affirmed by customer or third party authorized by the customer, and confirm on the basic functioning of the equipment hardware.
- **Software functionality acceptance:** Perform the testing with the test cases affirmed by customer or third party authorized by the customer, and confirm on the basic functioning of the equipment software.
- **Problems processing:** All the failed test cases are followed up with the required remedial action to close the problem
- **Sign test results to confirm:** Sign off on the test cases with the client or the customer authorized third party after performing the test.
- **Acceptance document:** This document contains the test cases with a detailed description of the scenario, the prerequisites for the test case execution, the expected test results, the acceptance criteria and the sign off table consisting of names of people who are authorized to sign off on the test cases.

Responsibility Matrix

No.	Service Activities	Huawei	Customer
1	Tools preparation	S	R
2	Acceptance application	R	-
3	Defining of acceptance criteria, test items, and fault classification	R	R
4	Acceptance test based on the acceptance criteria agreed on by both parties	S	R
5	Confirmation on the acceptance result with signature	R	R
6	Output of acceptance documents	R	S

2.5 One-off Support Service

When a customer who is not on support contract encounters a problem and urgently needs to resolve it, Huawei can appoint experienced engineers to the customer's site, helping the customer quickly resolve the problem. Huawei will charge on per man day basis or per man hour basis or a flat rate based on the requirements and agreement with the customer.

3 Acronyms and Abbreviations

A

ACD	Automatic Call Distributor
AIT	Attendant Communication Card
ApLogic	Application Logic Server
API	Application Programming Interface
AS	Access Server
ANI	Automatic Number Identification
ASL	Analogue Subscriber Line Board
ASP	Applications Service Provider
ASR	Automatic Speech Recognize

B

BHCA	Busy Hour Calling Attempt
BRI	Basic Rate Interface
BAM	Back Administration Module

C

CAP	CAMEL Application Part
CCP	Common Communication Proxy
CCS	Call Center Server
CCM	Call Control Module
CCITT	Consultative Committee on International Telegraphy and Telephony
COM/DCOM	Component Object Model/Distributed Component Object Model
CRM	Customer Relationship Management
CPU	Center Process Unit
CSTA	Computer Supported Telephone Applications

CTI Server	Computer&Telephony Integration Server
CTI	Computer& Telephony Integration
D	
DLL	Dynamic Link Library
DT	Digital Trunk
DTMF	Dual Tone Multi-Frequency
E	
ECC	Enterprise Call Center
F	
FP	Fax Peripheral
FSK	frequency shift keying
G	
GPS/GLONASS	GLObal NAVigation Satellite System
H	
HLR	Home Location Register
HTML	Hypertext Mark-up Language
I	
ICD	Intelligent Call Distribution
INAP	Intelligent Network Application Protocol
IOT	Interoperability Testing
ISDN	Integrated Service Digital Network
ISUP	Integrated Services Digital Network User Part
IRC	Intelligent Routing Center
ISP	Internet service provider
IVR	Interactive Voice Response

J**JAPI** Java Telephony API**M****MailM** Email Media Server**MAP** Mobile Application Part**MAS** Management Application Server**MCP** MAS Connection Proxy**MDS** Monitor Daemon Server**MEM** Memory**MML** Man Machine Language**MTP** Message Transfer Part**MTBF** Mean Time Between Failures**N****NGN** Next Generation Network**P****PBX** Private Branch Exchange**PCCP** Public Call Center Platform**PLMN** Public Land Mobile Network**PCM** Pulse Code Modulation**PRI** Primary Rate Interface**PSTN** Public Switched Telephone Network

R**RMS** Record Manager Server**S****SCE** Service Creation Environment**SCCP** Signaling Connection and Control Part**SIB** Service Independent Building Block**SIG** Signal Tone Board**SIGTRAN** Signaling Transport**SIP** Session Initiation Protocol**SMS** Short Message Service**SoftACD** Soft Automatic Call Distribution**SG** Signaling Gateway**SP** Signaling Point**SPT** Special Tone Board**STP** Signaling Transfer Point**SNMP** Simple Network Management Protocol**T****TAPI** Telephone Application Program Interface**TCAP** Transaction Capabilities Application Part**TCP/IP** Transfer Control Protocol/Internet Protocol**TDM** Time Division Multiplex**TNPP** Telephony Network Paging Protocol**TSAPI** Telephony Services Application Program Interface**TUA** Tele User Agent**TUP** Telephone User Part**TTS** Text to Speech**U****UVID** User Visit ID**UIDB** User Information Database

UDP

User Datagram Protocol

V

VDN	Virtual Directory Number
VCC	Virtual Call Center
VoIP	Voice Over IP
VP	Voice Peripheral

W

WAP	Wireless Application Protocol
WCCA	Web Client Communicate Agent
WCDMA	Wideband Code Division Multiple Access
WebM	Web Media Server
WECC	Web Enabled Call Center
WIN	Wireless Intelligent Network
WMG	Web Message Gateway