



COMVERSE
UNIVERSITY

Comverse Media Server (CMS)

Comverse ONE

Lesson Objectives

By the end of this lesson you will be able to:

- List the Comverse Media Server (CMS) functionalities in the Comverse ONE IVR service
- List the CMS structure and connectivity
- Describe the CMS architecture
- Describe the CMS flow in the IVR system

Agenda

Comverse Media Server Functionalities

CMS Structure and Connectivity

CMS Architecture

CMS Flow in the IVR System

CMS Part of the Comverse ONE IVR System

Check balance and logic
Control the Call

Comverse ONE

Rating Server

SLU

SGU

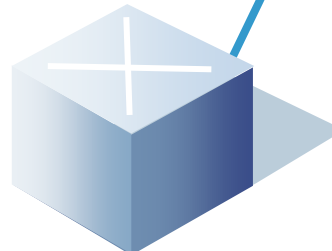
Play Announcements

IVR

ASU

CMS

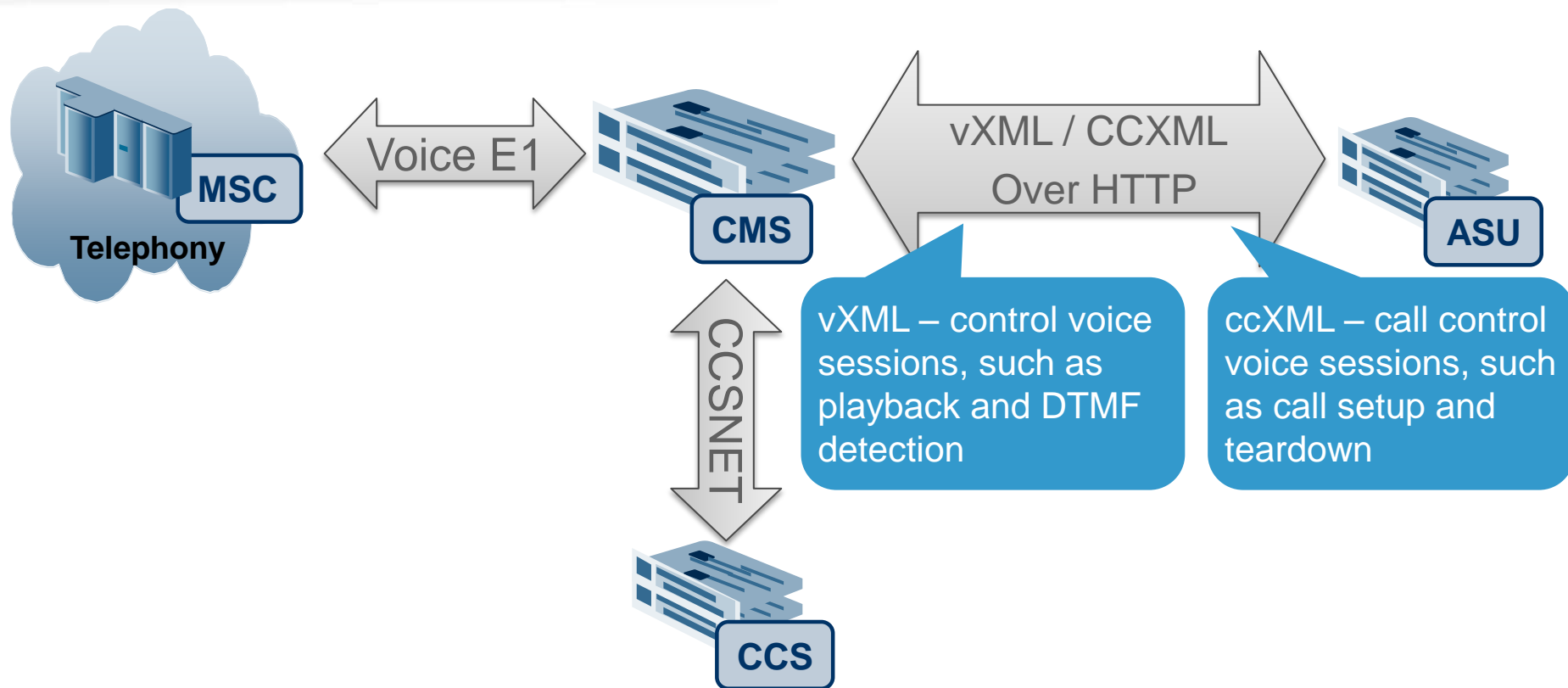
CCS



MSC



CMS Functionalities



**Telephony and
Signaling**

**Prompt Playing and
DTMF Detection**

**Application Interpretation
(vXML/ccXML over HTTP)**

What Is the CMS?



- Main access component for the TUI interface
- Open platform DTMF voice/video browser
- Multiple telephony network connectivity options
 - Circuit Switched (SS7, IN) and VOIP (SIP)
- Flexible and scalable architecture
 - Minimum capacity : 240 lines – 1 NIM Card
 - Maximum capacity: 480 lines – 2 Cards or 1 Termination board

Agenda

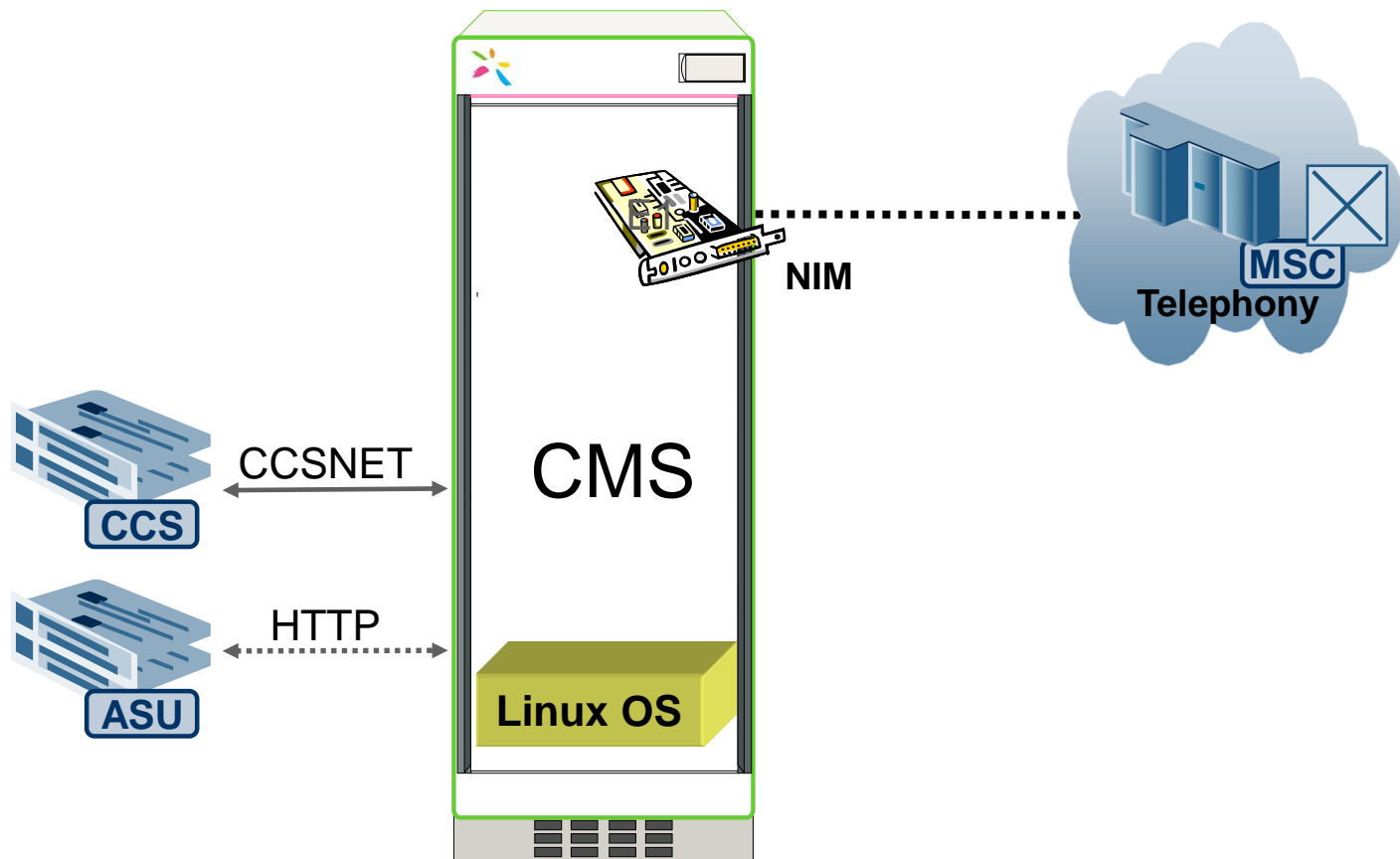
Comverse Media Server Functionalities

CMS Structure and Connectivity

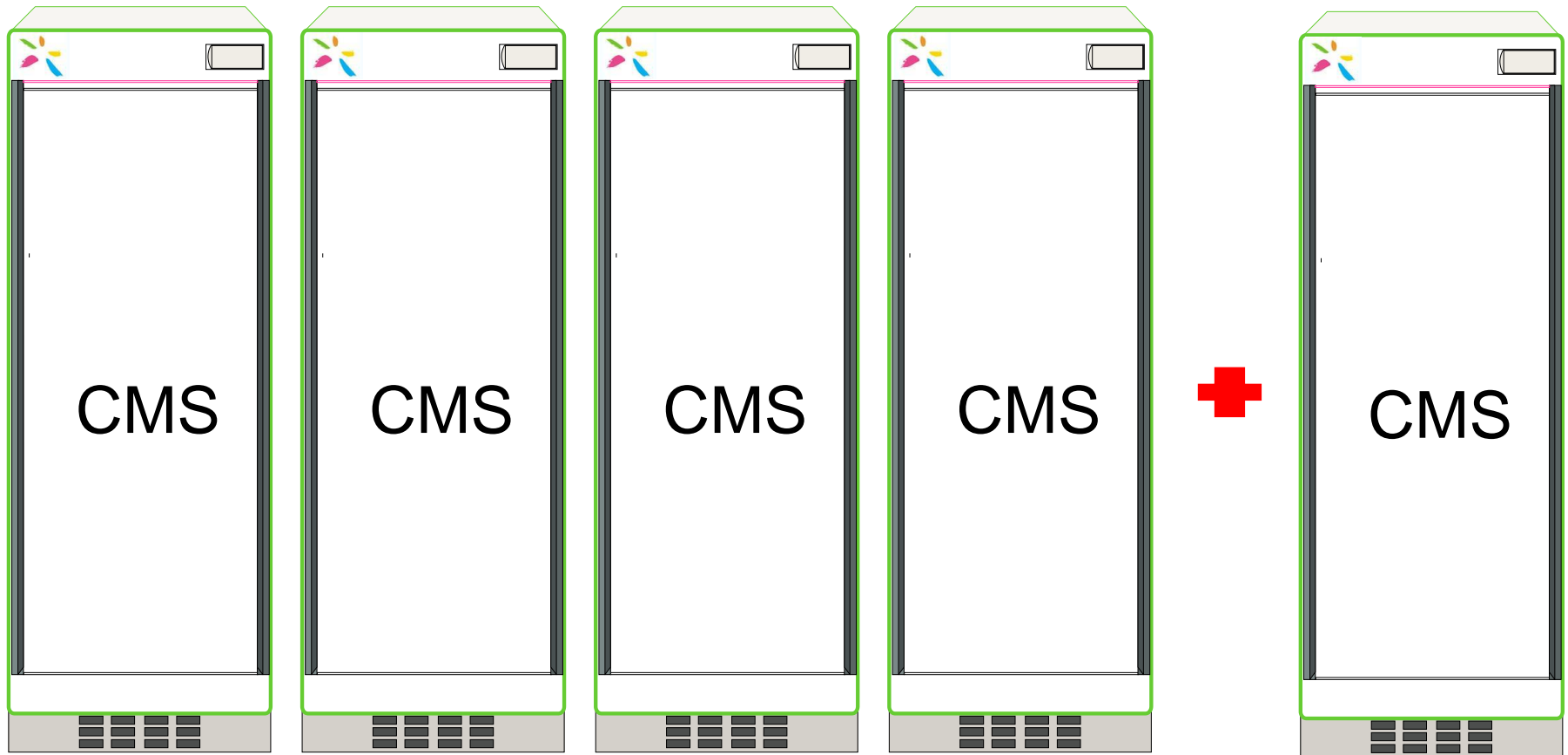
CMS Architecture

CMS Flow in the IVR System

CMS – Structure and Connectivity



CMS – N + 1 Redundancy



Agenda

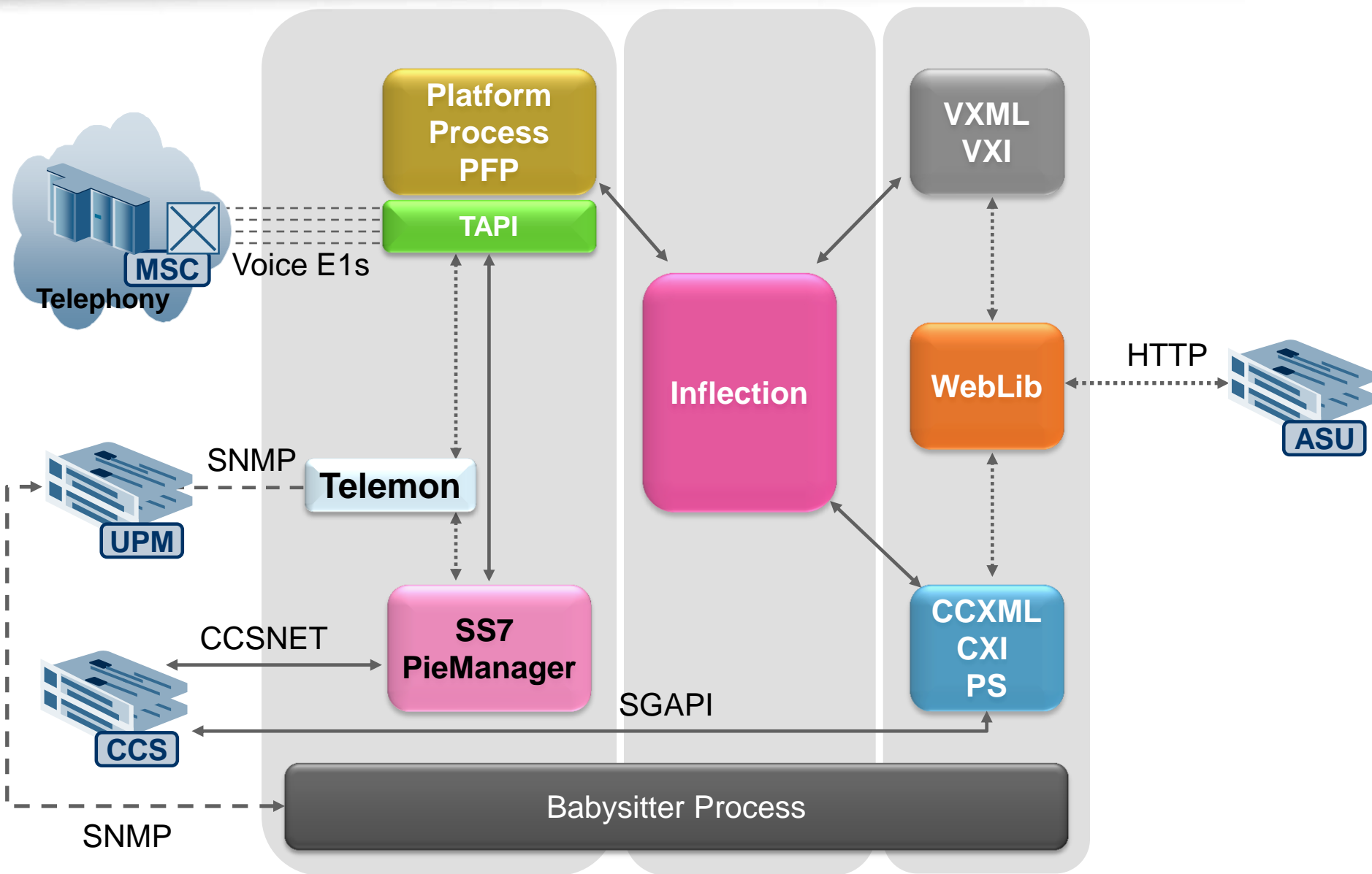
Comverse Media Server Functionalities

CMS Structure and Connectivity

CMS Architecture

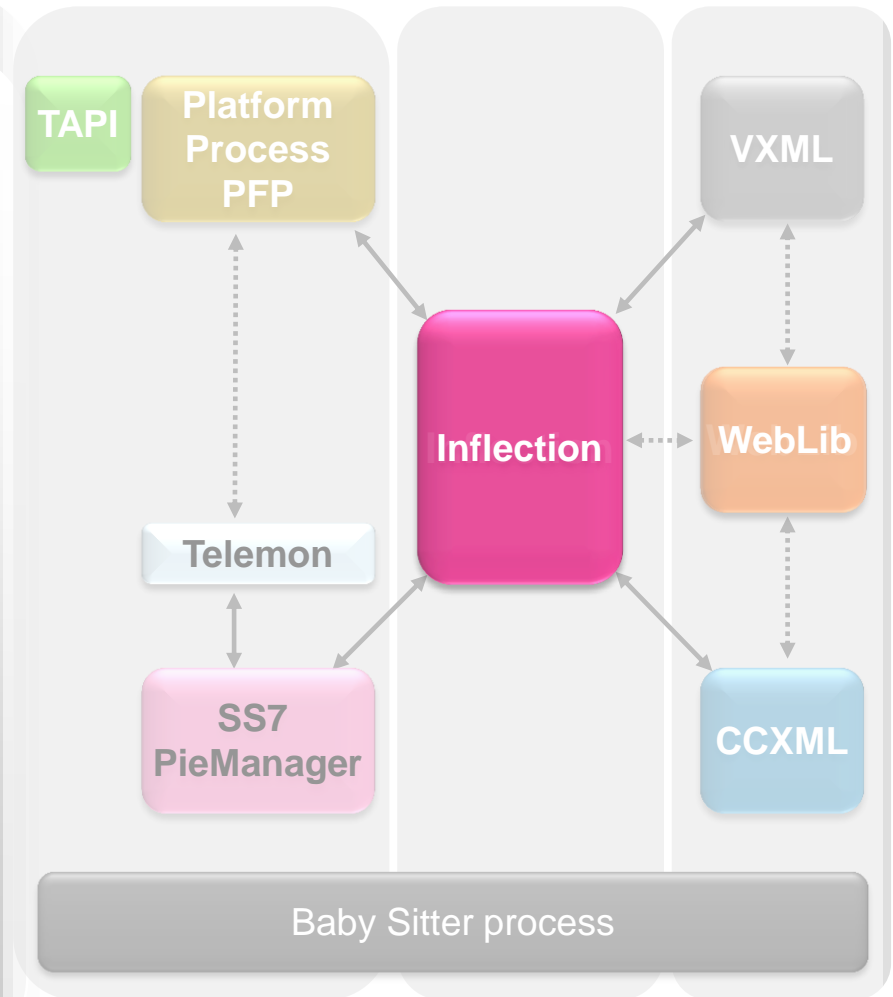
CMS Flow in the IVR System

CMS Architecture – Call Flow



Inflection

- Main process in the CMS
- Controls the business logic of the CMS
- Routes messages between internal process:
 - Incoming call notification
 - Alerting/answering calls
 - Disconnect messages
- Prompts play and digit collection requests



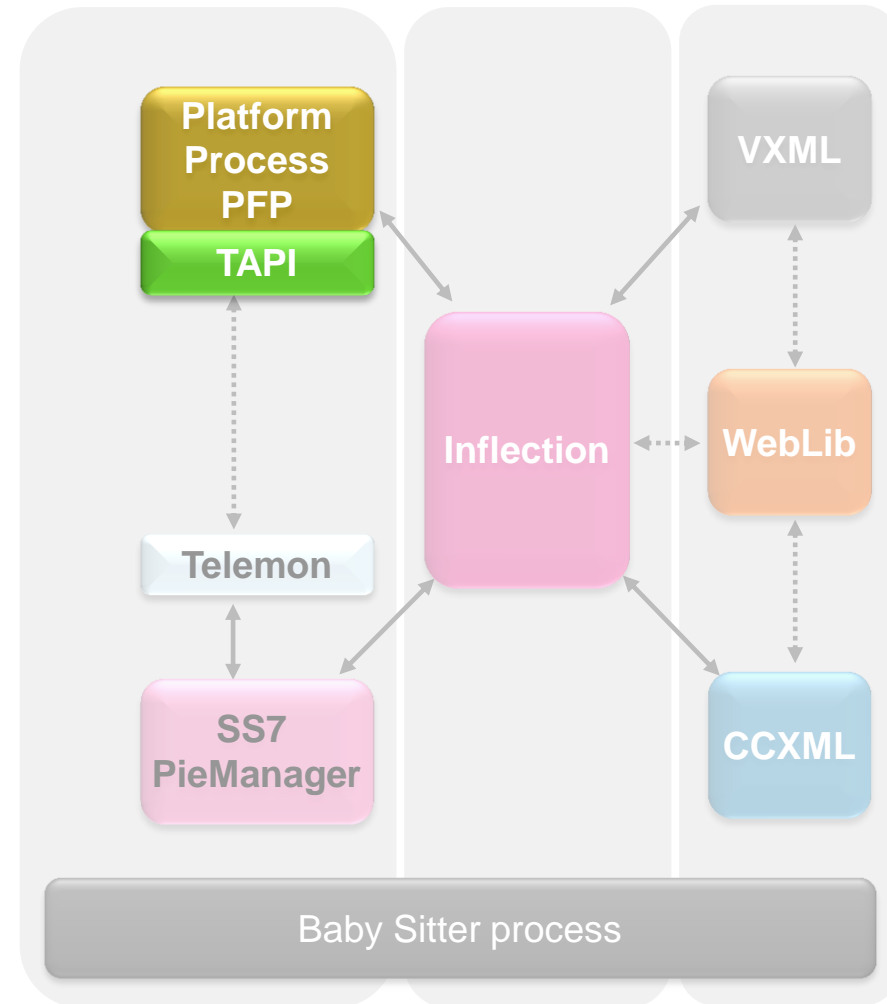
PFP and TPI

PFP is responsible for:

- Prompt playback
- Recording
- DTMF detection/collection
- Fax handling

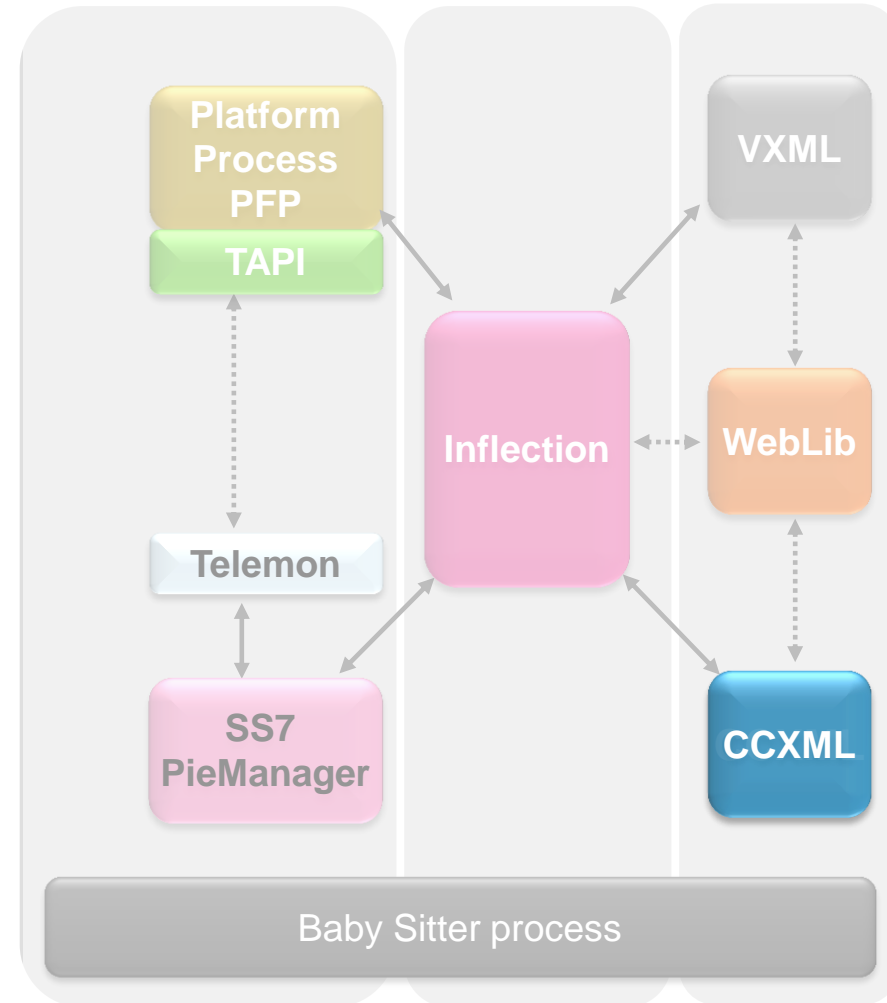
Telephony Access via TAPI:

- Voice and Media – NIM card



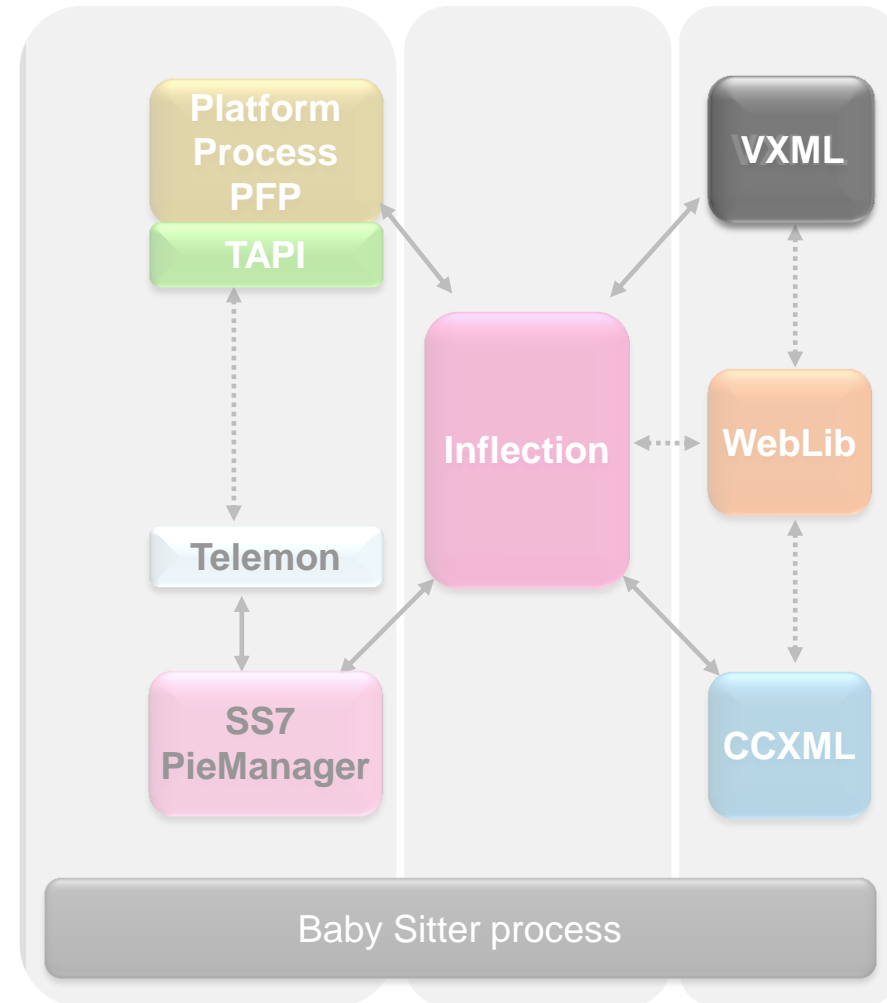
Protocol Service (CCXML)

- Fetches CCXML resources from the ASU via HTTP or from a local directory
- Parses CCXML documents
- Executes CCXML documents
- Event-based execution:
 - Call control events
 - Dialog related events based on VoiceXML execution
 - Asynchronous event handling
- Communicates with Inflection via the MACXML protocol



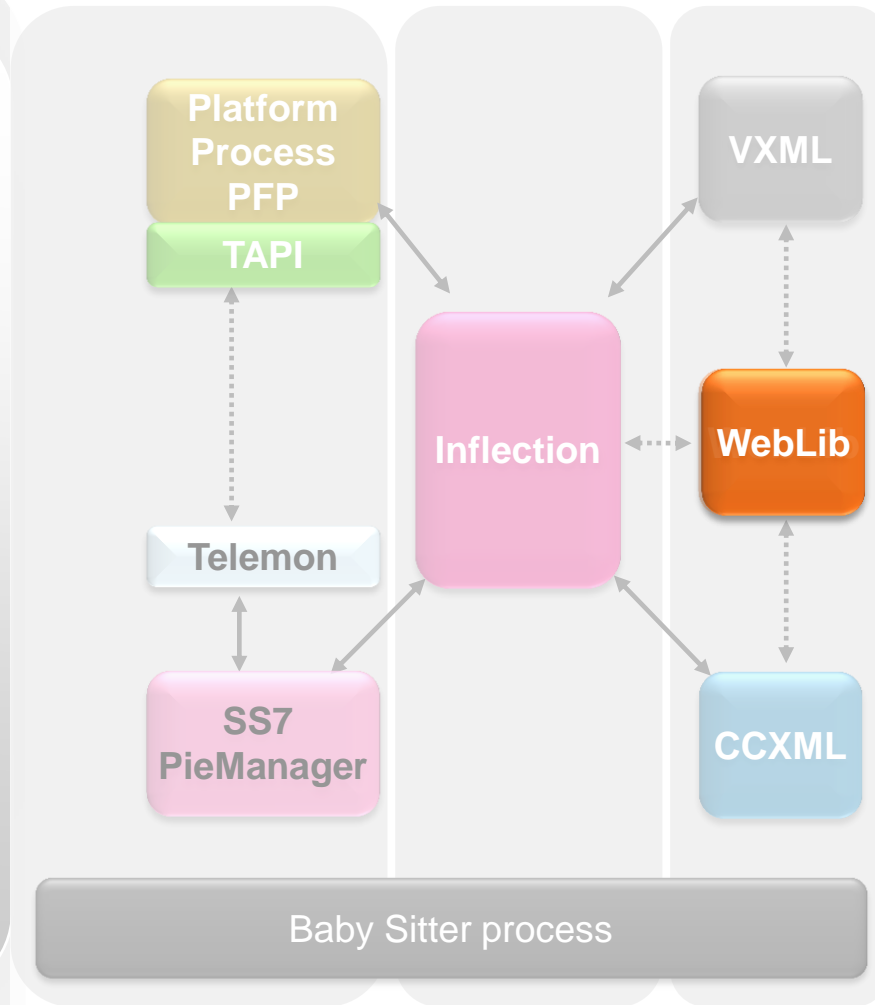
VoiceXML Interpreter (VXML)

- Fetches VoiceXML resources from an application server via HTTP (ASU server)
- Parses VoiceXML pages fetched from an application server and can validate its content against a schema
- Sends request for media handling to PFP, through Inflection, as defined by the VoiceXML page execution
 - Prompt playback
 - Speech/DTMF Recognition
 - Recording
 - Fax Reception/Transmission



WebLib – Apache

- Implements HTTP protocol on the CMS
 - GET for fetching documents and audio files
 - POST/PUT for Submitting data to an HTTP server
 - Performs caching for performance improvement
- Performs HTTP requests on behalf of CMS components
 - VoiceXML Interpreter
 - CCXML Interpreter
 - Inflection
 - PFP
- Cookie Management – specifically per session



Agenda

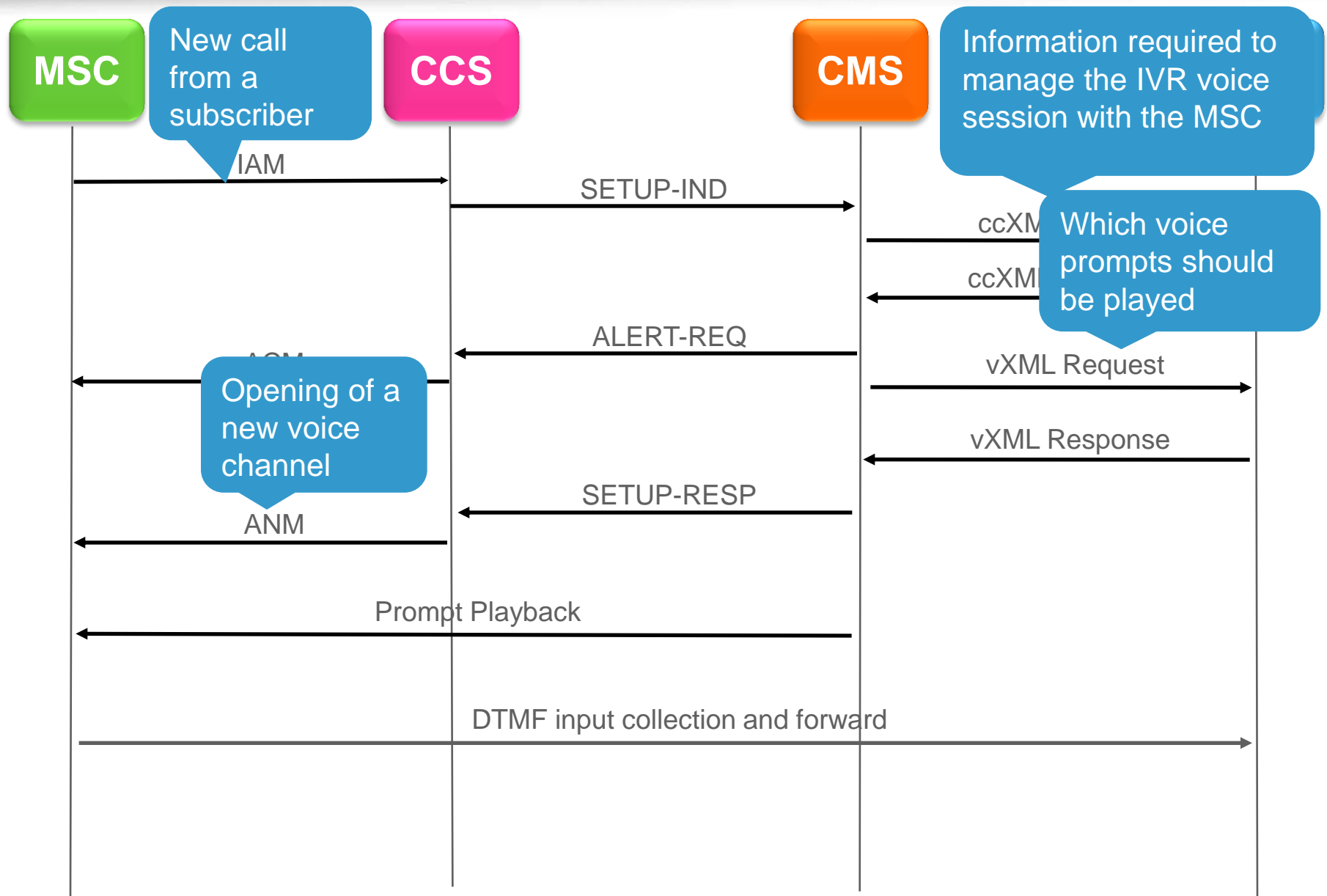
Comverse Media Server Functionalities

CMS Structure and Connectivity

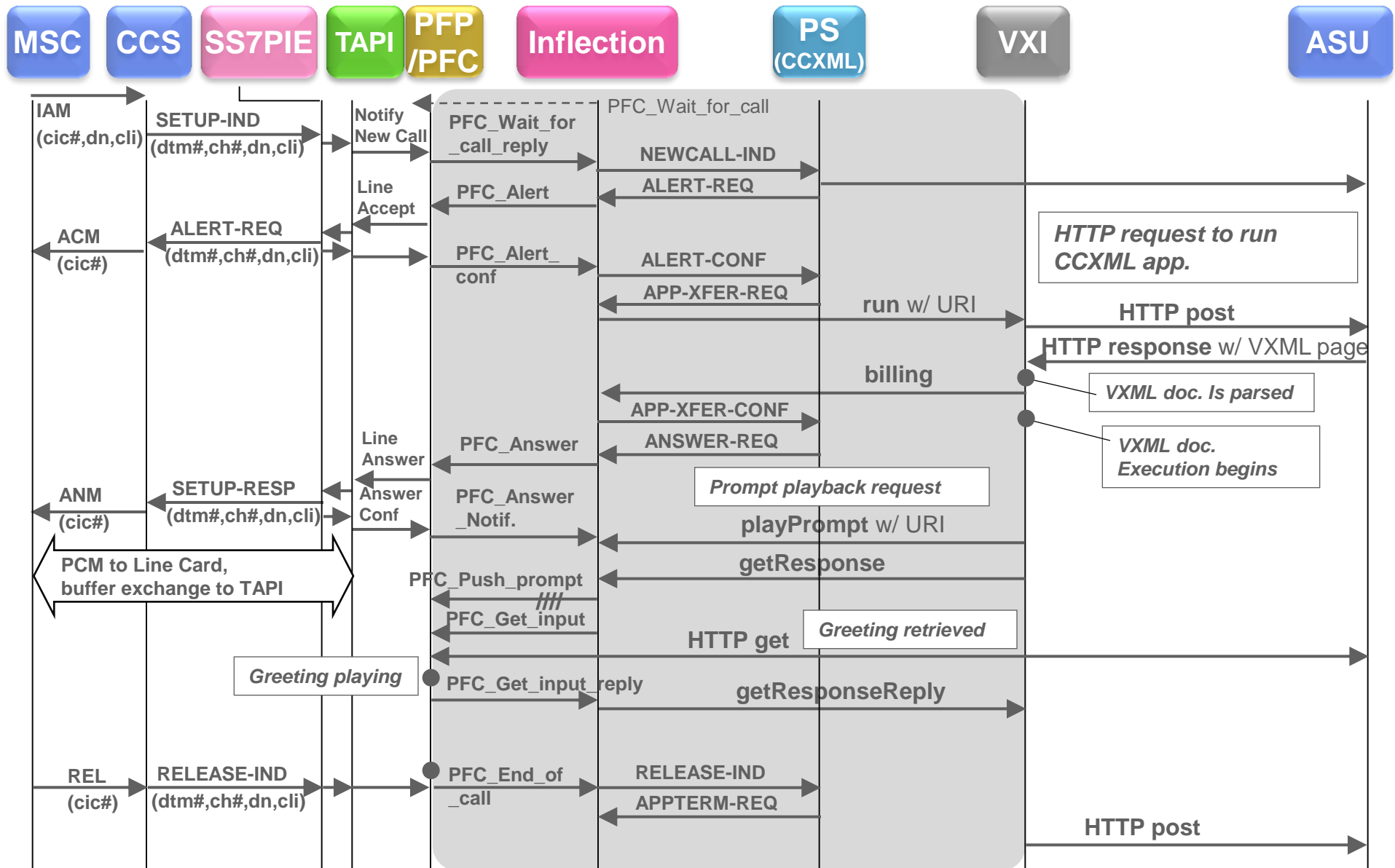
CMS Architecture

CMS Flow in the IVR System

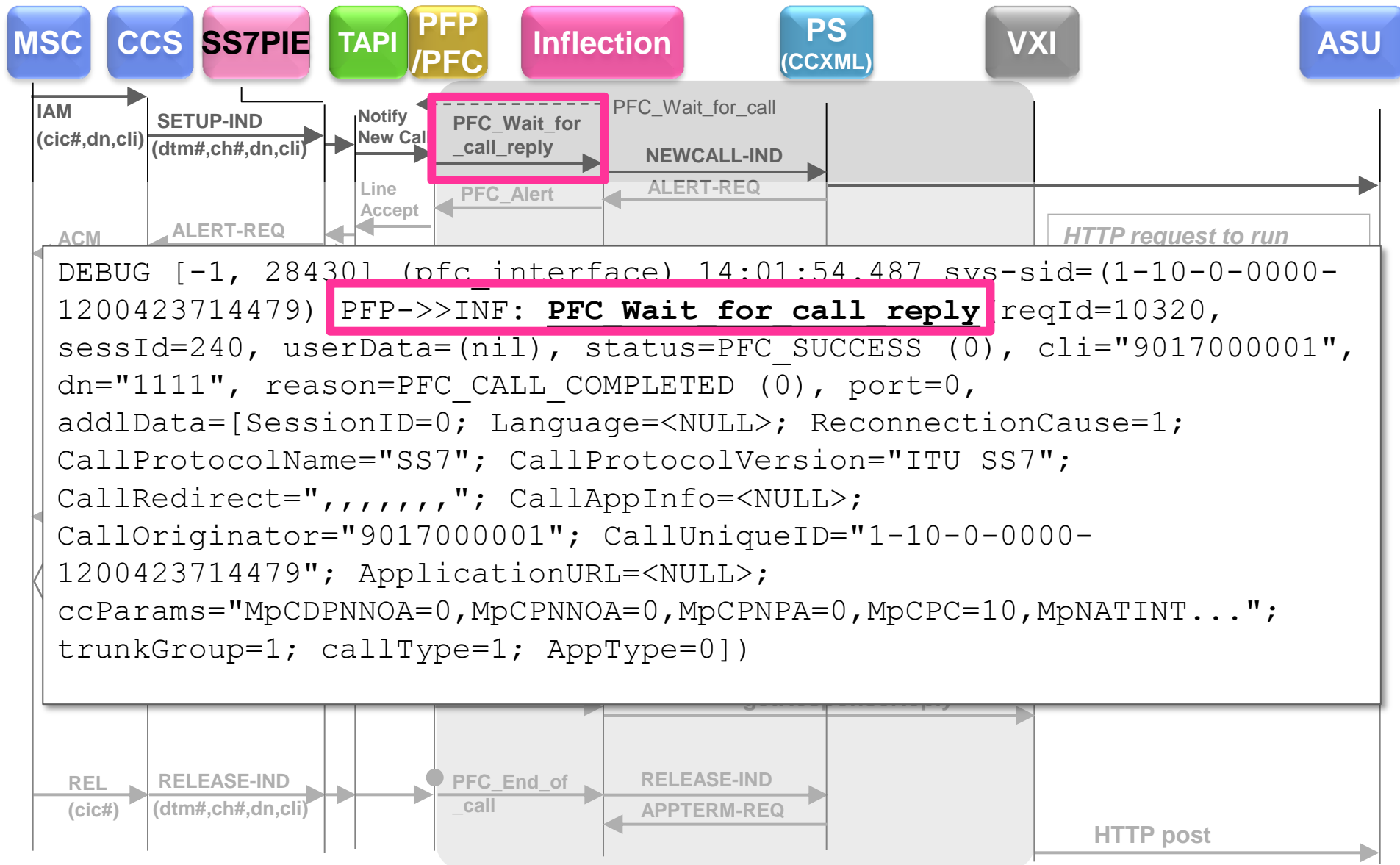
Basic ccXML and vXML Execution



Self Care IVR Session



Inflection Log



Review Questions

1. What protocol is used by the ASU to provide the CMS with instructions on how to manage the IVR session?
 - a. SS7
 - b. SNMP
 - c. CCSNET
 - d. CCXML
2. What protocol is used for the communication between CMS and CCS?
 - a. SS7
 - b. HTTP
 - c. CCSNET
 - d. VXML
3. Which process controls the business logic of the CMS:
 - a. SS7 PieManager
 - b. Platform Process (PFP)
 - c. Inflection
 - d. VoiceXML Interpreter (VXML)
4. Manages the voice channels :
 - a. SS7 PieManager
 - b. Platform Process (PFP)
 - c. Inflection
 - d. VoiceXML Interpreter (VXML)

Summary

This lesson has covered:

- Comverse Media Server (CMS) functionalities
- CMS structure and connectivity
- CMS architecture
- CMS flow in the IVR system

Thank
You!



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