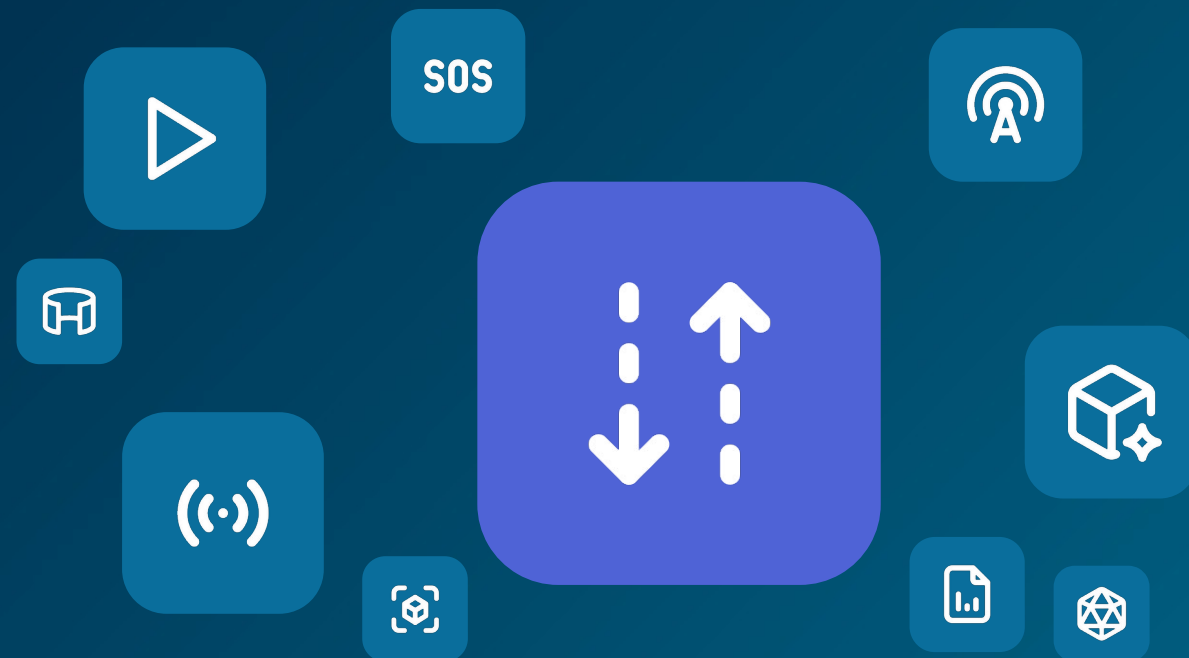


OVERVIEW AND UPDATES · REAL-TIME COMMUNICATIONS (RTC)

Real-time Media Communication (RTC)

Interactive, low-latency, real-time media communication

3GPP

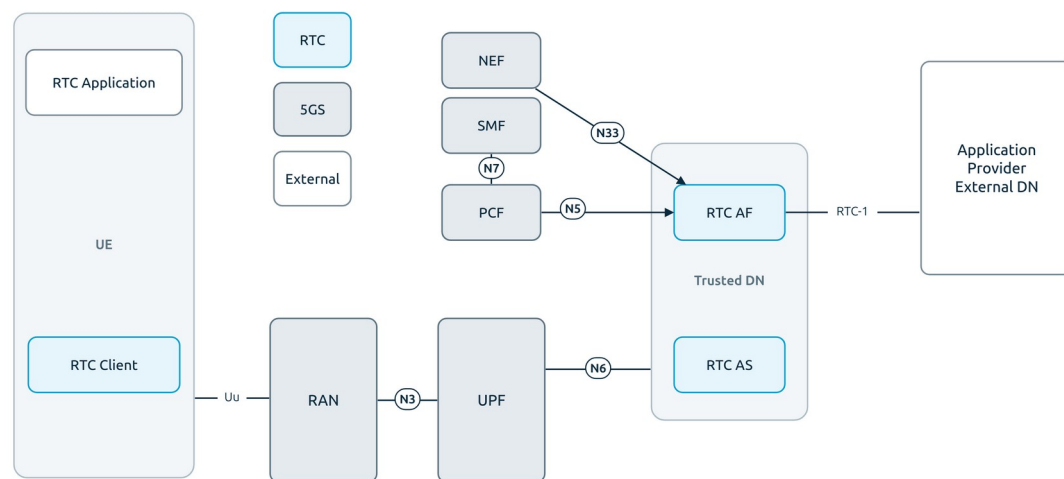


OCTOBER 2026 – www.5g-mag.com

LEARN

About the project

Interactive, low-latency, real-time media communication



FIND OUT MORE

Technical Analysis

Specifications

Reference Tools

More information at 5g-mag.com/tech/rtc

3GPP TS 26.506

Technical Specification

An architecture for real-time media communication integrated into the 5G System: functions, reference points, collaboration scenarios and call flows.

3GPP TS 26.113

Technical Specification

The procedures, APIs and protocols for the reference points of the RTC architecture, for WebRTC-based real-time media transport over 5G.

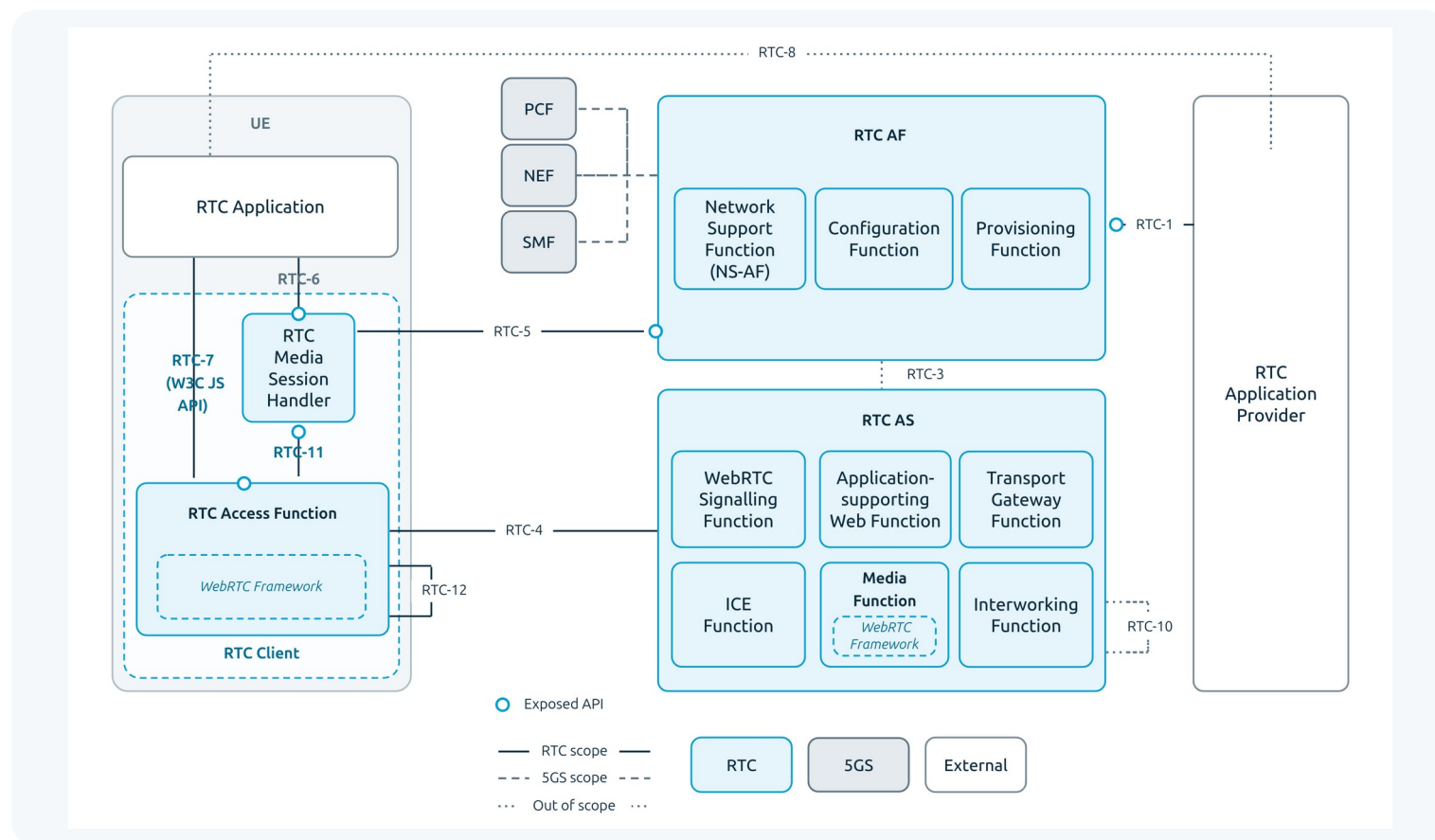
3GPP TS 26.510

Technical Specification

The provisioning and media session handling APIs common to 5G Media Streaming and RTC.

Architecture

The RTC functions in the UE and in the network, and the reference points between them



RTC AF

An Application Function dedicated to real-time media communication: provisioning, configuration and network support for a session.

RTC AS

An Application Server dedicated to real-time media communication: ICE (STUN and TURN), signalling, media and interworking functions.

RTC Client

In the UE: an RTC Access Function that sends and receives media, and an RTC Media Session Handler that assists the RTC Application.

RTC Application

A Native WebRTC App, using the RTC client APIs, or a Web App, running in a web browser with the W3C WebRTC APIs.

Collaboration with the operator

Four ways the 5G System operator and a third-party provider can share the work

Over the top

Over the top WebRTC: the session runs completely over the top. The operator may offer QoS allocation, bit rate recommendations and QoE report collection, on request by the UE.

Provided

MNO-provided WebRTC functions. In addition, the operator offers trusted ICE functions in the RTC AS, such as a list of trusted STUN and TURN servers.

Facilitated

MNO-facilitated WebRTC services. The operator hosts the sessions with a trusted WebRTC Signalling Function, which may also offer 5G network assistance.

Interoperable

Interoperable WebRTC services: the hosted case extended to interoperability between operators. Some of its details are for future study.

4

collaboration scenarios in TS 26.506, defined by which functions are in the operator's trusted domain. The Simple WebRTC Application Protocol (SWAP) of TS 26.113 supports the third.

Features

What RTC provisions and uses during a session, from TS 26.113 and TS 26.506

The six RTC features provisioned by the Application Provider at RTC-1, used by the client at RTC-5

Content configuration

Metrics reporting

Consumption reporting

Dynamic Policy invocation

Network Assistance

Edge content processing

Signalling and media for operator-hosted sessions

ICE: STUN and TURN

SWAP over WebSocket

Media over SRTP

Data over the WebRTC data channel

Added in Release 19 dynamic policies and endpoints

PDU Set Importance

Data burst size

Time to next burst

Expedited transfer

Multiplexed media

Media capability requirements

Timed metadata

The provisioning and media session handling APIs are defined once in TS 26.510 for both 5G Media Streaming and RTC; RTC adds one provisioning API for STUN, TURN and signalling services.

How it grew

What each 3GPP release added to real-time media communication

Release 18

The architecture, TS 26.506, is created. The procedures, APIs and protocols, TS 26.113, follow, with media session handling relying on TS 26.510. Reference point RTC-11 and PDU Set-based QoS handling are added.

Release 19

Dynamic policies gain PDU Set Importance, data burst size, time to next burst, expedited transfer and multiplexed media. Media capability requirements and timed metadata over the data channel are added. The generalised architecture gains reference point M13.

Release 20

Work plan of 28 September 2026: Energy_ARCH-MED (100%) is reflected in TS 26.506 V20.0.0 by CR 0013, and Energy_PRO-MED (0%) lists TS 26.113. A study, FS_Q4RTC_MED, looks at QUIC-based media delivery.

IMPLEMENT

Repositories

The repository of real-time media communication, from its description

REPOSITORY	WHAT IT IS	COVERS	LATEST RELEASE
rt-3gpp-swap	the SWAP server and library of the Simple WebRTC Application Protocol, for real-time media communication	SWAP over WebSocket Call set-up and close Endpoint selection	v0.9 16 Oct 2026 GitHub

FIND OUT MORE

- Technical Analysis
- Specifications
- Reference Tools

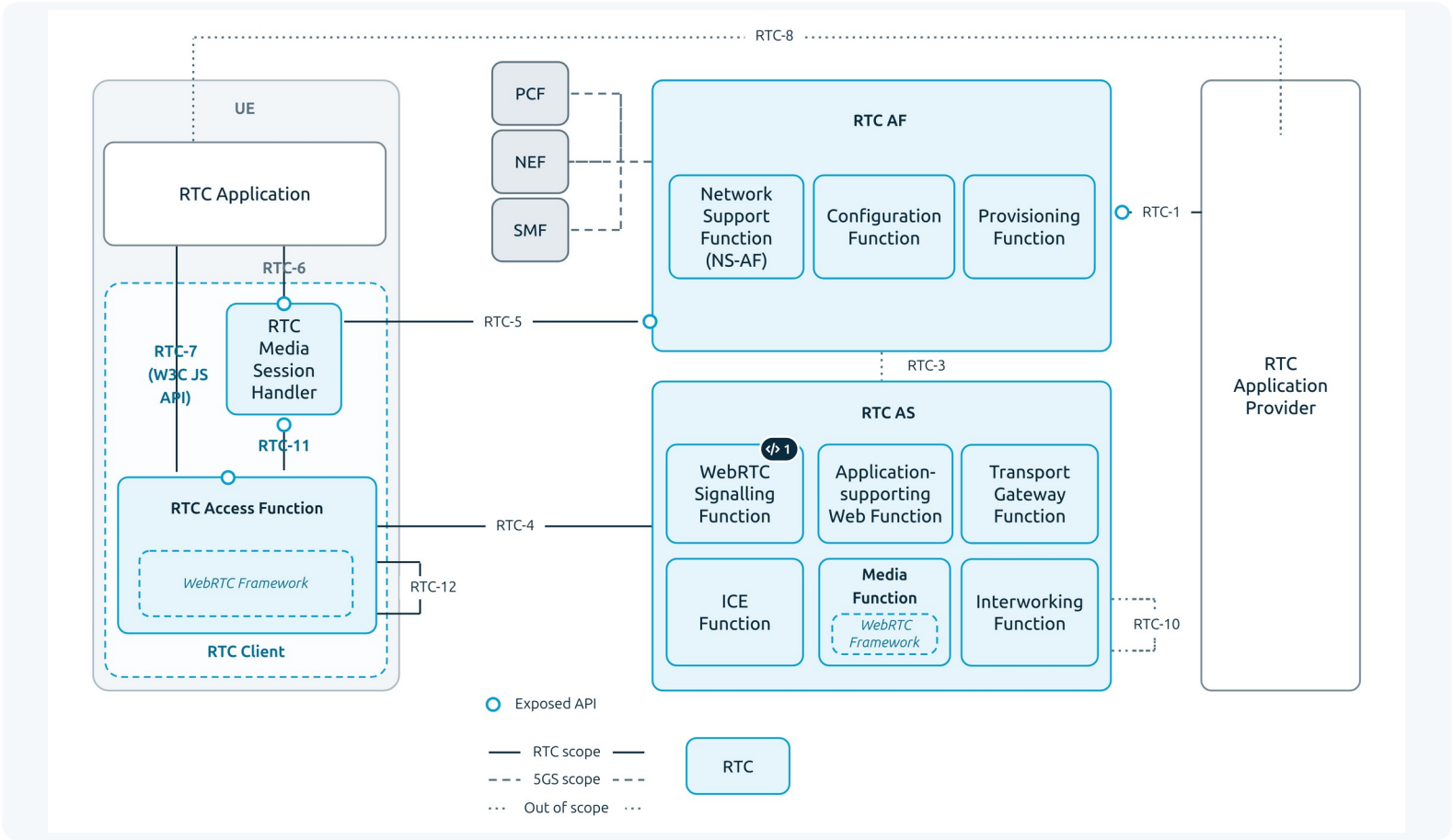
released

no release yet

IMPLEMENT

Repositories in the architecture

The Reference Tools on the specification figure, as the figure generator draws them



PROVIDED BY THE REFERENCE TOOLS

1 **rt-3gpp-swap**

Only the SWAP signalling of the WebRTC Signalling Function is provided.

Latest updates and roadmap

Status on 23 October 2026

IN DEVELOPMENT

- **Call teardown and errors**
The server accepts the acknowledgement that ends a call, and returns the error details the specification asks for.
- **Endpoint selection**
Selection among matching endpoints brought in line with the matching rules of the specification.
- **SDP handling**
An enforcement point on the answering side, so that a preliminary answer is not sent.

RELEASED

- **rt-3gpp-swap v0.9**
16 Oct 2026. First release of the SWAP server and its JavaScript library.

See it. Try it. Contribute.

Raise an issue, send a pull request or join the monthly public call.

Become a contributor →



GitHub



5g-mag.com

CONTRIBUTORS



Qualcomm