

# DMSC

(Dynamic Multi-agent Secured Collaboration)

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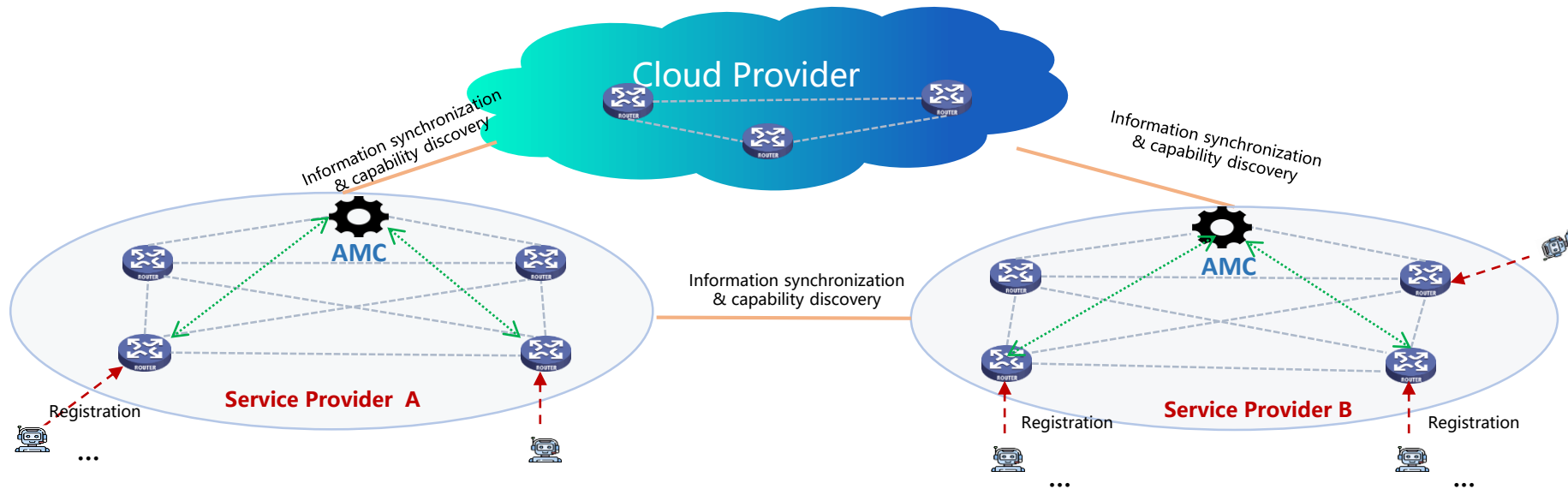
Proponents of DMSC are experts from

Huawei/Alibaba/BUPT/ZGCLAB/

IBM/CAS/ANP/ZTE/Asia Info/Tsinghua/China Telecom... ..

# DMSC(Dynamic Multi-agent Secured Collaboration)

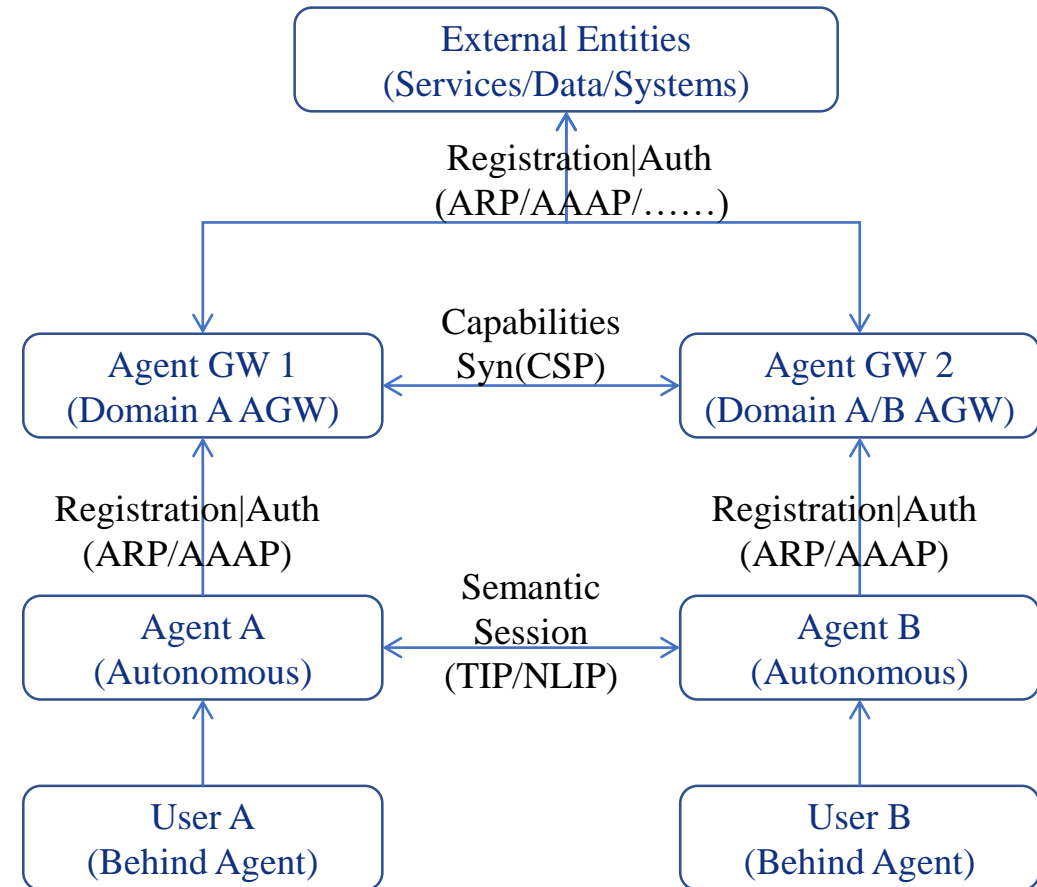
- **Purpose:** Standardize the architecture and protocol suite for the manageable, operationalizable AI Agent collaboration network
- **Aim:** Build one common infrastructure that facilitates the collaboration among agents from different manageable domains, based on AI Agent GW.



Dynamic Multi-agent Secured Collaboration Infrastructure Architecture  
(<https://datatracker.ietf.org/doc/draft-li-dmsc-inf-architecture/>)

# DMSC Technical Summary

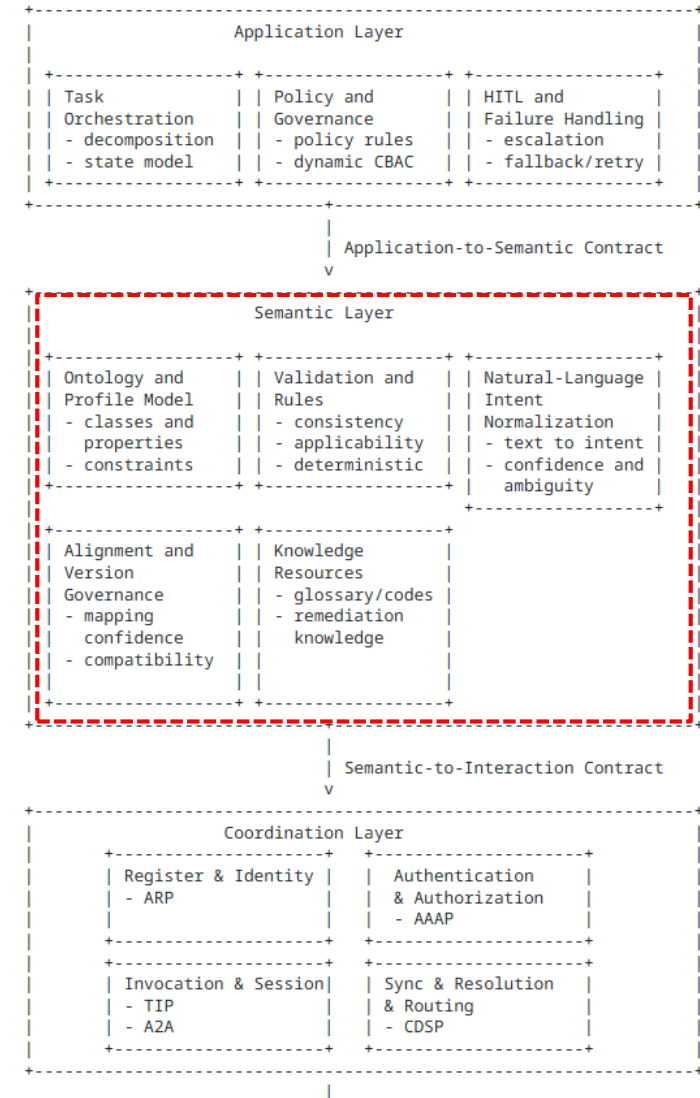
- Define the infrastructure architecture to facilitate the AI Agents collaboration(via AI Agent GW)
- Define the overall protocol suite that covers all the interaction procedures that are needed for the end2end secured agents collaboration
- Emphasize the semantic routing/natural language usage among the agents collaboration



DMSC Multi-agent Collaboration Protocol Suite(MACP)  
<https://datatracker.ietf.org/doc/draft-li-dmsc-macp/>

# IETF Potential Works and Related Works

- Potential Works in IETF
  - <Applicability of existing protocols>: DNS
  - <Extensions to existing protocols>: routing protocol?
  - <Wholly new protocols>: ARP/AAAP/TIP/NLIP ... etc.
- Where in the IETF might the work be done?
  - <ART Area>: Application Layer Standards
  - <Existing WG>: extension in related WGs  
in SEC area/Requirements from DMSC
  - <New WG>: DMSC
  - Semantic Layer/Semantic Routing... ..



<https://datatracker.ietf.org/doc/draft-zhang-dm-sc-ioa-semantic-interaction/>

## Work to date and future plans

- <Past Meeting: IETF 123/AI Agents application in 6G>
- <Currents DMSC related Proposals>
  - 10+ proposals that are listed at [DMSC Related Drafts](#)
- <Where do discussions take place?>
  - [dmsc@ietf.org](mailto:dmsc@ietf.org) is the discussion venue ([Subscribe IETF DMSC Mail List](#))
- <What plans are there at IETF-125?>
  - Two Side Meetings
    - ✓ March 18, 14:30-16:30 Jiangsu
    - ✓ March 19, 10:00-12:00 Jiangsu
- <What other plans for the future?>
  - BoF in IETF 126

# Overall Information of DMSC

## General Resources:

- Mailing List: [dmsc@ietf.org](mailto:dmsc@ietf.org) (subscribe the list at: <https://mailman3.ietf.org/mailman3/lists/dmsc@ietf.org/>)
- Draft Charter: <https://github.com/ietf-dmsc/Charter/blob/main/dmsc-charter.md>
- Material Venues: <https://github.com/ietf-dmsc/125meeting>

## Relevant I-Ds:

### Use Cases:

1. Agent Use Cases and Requirements in 6G ([dmsc-ai-agents-use-case](#))
2. Network AI Agent Use Cases and Requirements in 6G([network-agent-use-cases-in-6g](#))

... ..

### Solutions:

1. Problem Statement and Requirements for Dynamic Multi-agent Secured Collaboration (DMSC) (<https://datatracker.ietf.org/doc/html/draft-song-dmsc-problem-statement>)
2. Multi-agent Collaboration Protocol Suite(<https://datatracker.ietf.org/doc/draft-li-dmsc-macp/>)
3. Dynamic Multi-agents Secured Collaboration Infrastructure architecture(<https://datatracker.ietf.org/doc/draft-li-dmsc-inf-architecture/>)
4. Agent Collaboration Protocols Architecture for Internet of Agents <https://datatracker.ietf.org/doc/draft-liu-dmsc-acps-arc/>
5. Internet of Agents Task Protocol (IoA Task Protocol) for Heterogeneous Agent Collaboration <https://datatracker.ietf.org/doc/draft-yang-dmsc-ioa-task-protocol/>
6. Requirements for Agent Gateway(<https://datatracker.ietf.org/doc/draft-liu-dmsc-gw-requirements/>)
7. Agent Communication Gateway for Semantic Routing and Working Memory (<https://datatracker.ietf.org/doc/draft-agent-gw/>)
8. Intent-based Agent Interconnection Protocol at Agent Gateway (<https://www.ietf.org/ietf-ftp/internet-drafts/draft-sz-dmsc-iaip-00.txt>)
9. Security Analysis of Multi-agents Secured Communication and Limitations of Existing Protocols(<https://datatracker.ietf.org/doc/draft-zhang-dmsc-mas-communication/>)
10. Ontology-based Semantic Interaction for Internet of Agents(<https://datatracker.ietf.org/doc/draft-zhang-dmsc-ioa-semantic-interaction/>)
11. AI Agent Discovery and Invocation Protocol(<https://datatracker.ietf.org/doc/draft-cui-ai-agent-discovery-invocation/>)
12. Cross-Domain Interoperability Framework for AI Agent Collaboration(<https://datatracker.ietf.org/doc/draft-cui-dmsc-agent-cdi/>)
13. Using Natural Language for Universal Coordination in Multi Agent Systems(<https://datatracker.ietf.org/doc/draft-verma-dmsc-nlip-notes/>)
14. HJS: A Judgment Event Protocol(<https://datatracker.ietf.org/doc/draft-wang-hjs-judgment-event/>)
15. Relay Attacks in Intra-handshake Attestation for Confidential Agentic AI Systems (<https://mailarchive.ietf.org/arch/msg/dmsc/QC2adIcYkxiTlniEcc7ggk86BAY/>)
16. Remote Attestation with Exported Authenticators (<https://datatracker.ietf.org/doc/draft-fossati-seat-expat/>)

Welcome to Join in  
DMSC!

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