PRINCIPAL ARCHITECT · FRACTIONAL ENGAGEMENT

Fractional Executive Architecture

SRv6 Protocol Simplification, IETF Standards, and Carrier Sales Authority

9	7–55×	15–25%
Published RFCs	Contract ROI	Cost vs Full-Time

This white paper examines the strategic and technical leadership requirements for organizations navigating the SRv6 protocol transition: SRv6 simplification, enterprise sales closing authority, and IETF/ITU-T/BBF/3GPP standards alignment, with the ROI framework for fractional principal architect engagement.

1. The Leadership Gap in SRv6 Transition Programs

The SRv6 migration demands principal-level judgment combining deep protocol expertise, active IETF standards influence, and carrier sales authority — a combination commanding $400K–$700K annually full-time. The Fractional Executive Architecture model delivers this at 15–25% of that cost.

"A single closed Tier-1 SP contract returns the annual retainer cost by 7–55x."

15–25%	9	7–55×	6
Cost vs Full-Time Hire	Published IETF RFCs	ROI per Closed Contract	IETF WGs Covered

2. Pillar One — Protocol Simplification with SRv6

A Tier-1 SP backbone carries RSVP-TE, IS-IS with TE extensions, LDP, BGP/MPLS L3VPN, EVPN/VPLS, BFD, PCE/PCEP, and VXLAN — each requiring dedicated engineering expertise and its own failure mode analysis. SRv6 uSID collapses all of these.

RSVP-TE Elimination	SR-TE policies (RFC 9256) replace LSPs — zero stateful distributed protocol databases.
LDP Replacement	IS-IS SR-capability + SRv6 locator (RFC 9252) — zero additional protocol overhead.
L3VPN Migration	BGP SRv6 L3VPN End.DT4/DT6/DT46 SIDs replace MPLS VPN label stacks.
L2 EVPN Migration	uDX2/uDX2V replace VPLS/EVPN-MPLS; uDT2U/uDT2M replace E-LAN BUM.
GTP-U Replacement	SRv6 MUP: 55B overhead → 8–12B, 5-header → 2-header ASIC parse.
VXLAN Replacement	SRv6 uSID L2/L3 VPN with native eBPF/Cilium host extension — no gateway.

3. Pillar Two — Enterprise Sales Closing Authority

Tier-1 SP procurement involves architecture review board approval, interop lab validation, and executive alignment. A fractional principal architect with published RFCs and documented production migration experience removes the final technical objection in carrier sales cycles.

IMPACT: **A single closed Tier-1 SP contract ($2M–$10M ACV) returns the annual retainer cost ($180K–$300K) by 7–55×.**

4. Pillar Three — IETF and Multi-SDO Standards Alignment

Working Group	Role
IETF SPRING	SRv6 architecture (RFC 8986), uSID (RFC 9252) — the primary SRv6 standards body
IETF PCE	SR-PCE PCEP extensions (RFC 8664) — every SRv6 TE deployment touches PCE
IETF LSR	IS-IS/OSPF SRv6 extensions, Flexible Algorithm (RFC 9350) — the IGP layer
IETF BESS	BGP SRv6 L2/L3 VPN, EVPN service types — the VPN/EVPN service layer
IETF IDR	BGP-LS topology advertisement, BGP SR-TE policy — the BGP control plane

IETF TEAS	SRv6 TE, Flex-Algo, SR Policy architecture — the TE framework
ITU-T / BBF / 3GPP	OAM, broadband aggregation, 5G NTN/MUP alignment for cross-domain RFPs

White Paper Summary — SRv6 uSID Technology Conclusion

SRv6 uSID represents the architectural simplification carrier and enterprise networks have needed since the MPLS-era protocol proliferation. The IETF standards framework provides multi-vendor interoperability that makes SRv6 a safe infrastructure investment — no single vendor controls the protocol.

The Fractional Executive Architecture model delivers principal-level expertise — RFC authorship, Routing Directorate authority, production migration experience, and carrier sales closing authority — at 15–25% of full-time hire cost, with direct ROI from closed contracts and standards-aligned positioning that commands carrier procurement priority.

Ready to Close Your Next Carrier Contract?

SRv6 TEK Innovations provides fractional principal architect engagement for SRv6 transition leadership, standards alignment, and enterprise sales authority.

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