Intent-Based Networking (IBN) Use Cases
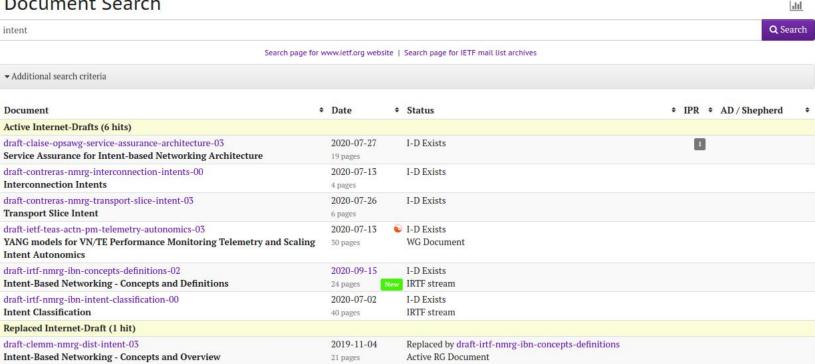
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Introduction

- NMRG Charter
  - "In this area, Intent-Based Networking (IBN) provides high-level, user-friendly abstractions to describe business and operational goals, and alleviates the need for the user to know and derive the technical details on how to achieve those goals. IBN is an essential component of self-driving networks but requires the introduction of intelligent mechanisms to properly process intents with as little human involvement as possible."
- Related efforts in different IETF WG and IRTF RG
  - **NMRG**, ANIMA, SUPA...

IBN @ IETF

Document Search

| intent | **🔍 Search** |

Search page for www.ietf.org website | Search page for IETF mail list archives

▾ Additional search criteria

Document ⇕	Date ⇕	Status ⇕	IPR ⇕	AD / Shepherd ⇕
Active Internet-Drafts (6 hits)				
draft-claise-opsawg-service-assurance-architecture-03 **Service Assurance for Intent-based Networking Architecture**	2020-07-27 19 pages	I-D Exists	1	
draft-contreras-nmrg-interconnection-intents-00 **Interconnection Intents**	2020-07-13 4 pages	I-D Exists		
draft-contreras-nmrg-transport-slice-intent-03 **Transport Slice Intent**	2020-07-26 6 pages	I-D Exists		
draft-ietf-teas-actn-pm-telemetry-autonomics-03 **YANG models for VN/TE Performance Monitoring Telemetry and Scaling Intent Autonomics**	2020-07-13 30 pages	🌐 I-D Exists WG Document		
draft-irtf-nmrg-ibn-concepts-definitions-02 **Intent-Based Networking - Concepts and Definitions**	2020-09-15 24 pages `New`	I-D Exists IRTF stream		
draft-irtf-nmrg-ibn-intent-classification-00 **Intent Classification**	2020-07-02 40 pages	I-D Exists IRTF stream		
Replaced Internet-Draft (1 hit)				
draft-clemm-nmrg-dist-intent-03 **Intent-Based Networking - Concepts and Overview**	2019-11-04 21 pages	Replaced by draft-irtf-nmrg-ibn-concepts-definitions Active RG Document		

IBN @ NMRG

- IBN Work Items
  - Define appropriate validation scenarios and use cases describing concrete examples of intent expressions and functions
    - Goal: assess the quality and completeness of specifications and evaluate intent-based systems functionalities in experimental settings.
- Similar past experience: UCAN BoF (IETF 90)
  - Important outcome of the NMRG work (ANIMA WG)
  - UCAN docs (e.g., RFC 8316)

Template for IBN Use Cases

- Example: UCAN "template"

  - Problem statement
  - Intended User & Administrator Experience
  - Parameters and Information
  - Interaction with other devices

- What are the items for a IBN use case?
- We should focus on a single I-D or several I-Ds?

Potential IBN Use Cases @ NMRG

- Identified potential use cases

  - Luis Contreras and Panagiotis Demestichas
    - Transport Slice Intent (5G EVE EU project)
  - Sabine Randriamasy with her work
    - Intent-Based 5G IoT Network Slice
  - Amina Boubendir
    - Network Slicing Lifecycle Automation (ONAP)

- Ideas?

Outlook for IBN Use Cases @ NMRG

- Who is willing to contribute?
- We should invite the authors of intent I-Ds to present @ NMRG?
- How can we move this conversation forward?

Thank you.

Questions?