IPv6 Adoption in Saudi Arabia

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Agenda

• Background
• IPv6 National Strategy Objectives & Activities
• Outcome
• Moving forward
Background
KSA Internet Users (million)

- 2010: 11.4 million
- 2011: 13.6 million
- 2012: 15.8 million
- 2013: 16.5 million
- 2014: 19.6 million
- 2015: 21.6 million
- 2016: 24 million

Total increase: 12.6 million
Percentage increase: 74.8%
Saudi Arabia IPv4 Allocations

- 8.9 Million IPv4 Addresses
- 86.96% Advertised
- 0.423 IPv4 Address Per Internet User
IPv6 National Strategy Objectives & Activities
Strategy Objectives

- Ensure continuous development of the Internet in the country
- Prepare for IPv4 exhaustion to ensure stability, business continuity and continued growth of the Internet in Saudi Arabia
- Smooth adaptation of IPv6 by key stakeholders to minimize risks
- Raise overall IPv6 awareness nationwide by approaching stakeholders of both the public and private sectors

Community driven

Collaborative effort

Government Agencies
Service Providers
Vendors
Major Banks
Universities

National and International participation

RIPE
Menog
IPv6 Forum
ITU
GCC
Phase I: 2007 - 2012

Focus on Service Providers
- Establishment of Task Force
- Trainings and conferences
- IPv6 website

Identify countries IPv6 best practices
- Some Service Providers started to provide IPv6 connectivity to their corporate customers
- International & regional cooperation (ITU, GCC, RIPE, MENOG, etc.)
- CITC built IPv6 Lab and tunnel broker
- Core national services readiness (Saudi ccTLD and filtering services)
**Strategy Tracks**

**Infrastructure**
- IPv6 Addressing
- IPv6 Commercial Support for Nation Wide Infrastructure
- .SA ccTLD IPv6 Compliance
- IPv6 Compliant Internet Filtering
- IPv6 Lab

**Awareness**
- IPv6 Task Force
- Outreach Activities
- International Cooperation
- IPv6 Training
- IPv6 Compliant Procurement
Phase II: 2013 - 2016

Focus on Enterprise/Education

- Conducting 4 Pilot Projects on Enterprise Scale
- IPv6 deployment Guidelines and Procedures
- Update IPv6 website and add Arabic version
- Some Service Providers started to provide IPv6 to home consumers.
  
- Some Enterprises started to provide their services through IPv6
- CITC IPv6 Lab Enhancement
- Trainings and conferences
Pilots Projects:
IPv6 enablement for internet facing services: DNS Website, Mail, etc.

Phase II: 2013 - 2016

Guidelines Development Methodology

Implementation phases
- Initiation & Planning
- Need Assessment
- Design
- Deployment
- Operation & Monitoring

Government
Private Enterprises
Education
Enterprise

IPv6
Saudi Arabia
TAK FORCE
www.citc.gov.sa
Activities

- 17 Task Force meetings hosted by the taskforce members
- IPv6 Training
  - IPv6 Training by CITC (three sessions)
  - IPv6 Road Show was organized 10 times. Thanks to MENOG and RIPE
- IPv6 Conferences
  - Three IPv6 National Conferences were organized (2009, 2011 and 2015)
### KSA ASes Announcing IPv6 Prefixes

<table>
<thead>
<tr>
<th>Region</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>KSA</td>
<td>21 %</td>
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<tr>
<td>Middle East</td>
<td>12 %</td>
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<tr>
<td>RIPE region</td>
<td>26 %</td>
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<tr>
<td>Worldwide</td>
<td>23 %</td>
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### KSA IPv6 Prefixes

<table>
<thead>
<tr>
<th>Year</th>
<th>Prefixes</th>
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<tbody>
<tr>
<td>2008</td>
<td>2</td>
</tr>
<tr>
<td>Q2 2017</td>
<td>76</td>
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Internet Core Readiness

Saudi Arabia: 84.07%
IPv6 Users

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>2008</td>
<td>0%</td>
</tr>
<tr>
<td>2017 September</td>
<td>6.1%</td>
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Moving Forward...
We are working on:

- Continue capacity building and collaboration
- Following up with the service providers about their IPv6 deployment.
- Utilizing the collaboration forum to improve the internet ecosystem in Saudi Arabia
  - IoT, Cloud, QoE
- IPv6 + Emerging internet topics
Visit the Taskforce website for more info

www.IPv6.sa
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Thank You