

# 02 August 2016

## **Telkom network provides backbone for 2016 municipal elections.**

The Independent Electoral Commission (IEC) has selected Telkom as its trusted partner to provide the state-of-the-art ICT services required to enable free and fair elections in South Africa.

On 3 August 2016, over 26.3 million of South Africans will head to their local voting stations to cast their votes in what is anticipated to be one of the most highly contested and record breaking municipal elections in the country's history. Telkom will provide a variety of ICT solutions to be sure that every point of the electoral chain, from the local voting station to the National Results Centre is connected to an efficient, reliable network that will validate and report on these important municipal election results.

Telkom will enable the safe and secure delivery of ballot results from over 22 000 polling stations around the country to the National Results Operation Centre (NROC) at the Tshwane Show Grounds, via nearly 350 Municipal Election Offices (MEOs), 9 Provincial Results Operation Centres (PRCs) and the IEC's Headquarters (IEC HQ).

Jacqui O'Sullivan, Managing Executive: Group Communications and Public Relations for the Telkom Group, says: "As a partner of the Electoral Commission since the first South African elections with universal franchise in 1994, we're proud to continue the tradition of supporting democracy in South Africa. Free and fair elections are an essential component of our democracy. ICT is a vital tool for enhancing and validating the electoral process."

In addition to the primary solution that caters for the IEC's needs, Telkom is providing a network of open access free Wi-Fi hotspots in almost 1000 voting stations all over the country to show voters the power and quality of the Telkom network. This pilot programme will utilise Telkom's existing LTE/4G infrastructure and will likely be expanded for future elections, if successful.

Telkom will also fulfil the requests of broadcasters and media channels so that South Africa, as well as the world, is kept informed at every step of the voting and counting process through the use of dedicated Internet links.

The solution includes access for the IEC's Wide Area Network (WAN) through Telkom's Virtual Private Network Services (VPNS) platform, which uses multiple access mediums, including satellite technology, Diginet/Martis,, Metro LAN, Telkom's ADSL and ISDN (Primary and Basic Rate) architecture.

"To this end Telkom's extensive national footprint, ubiquitous network and the depth of skills and expertise within the organisation have facilitated the customer-specific requirements of the IEC," O'Sullivan continued.

Telkom's Data Centre at its Centurion Headquarters is at the heart of the IEC's Disaster Recovery (DR) measure. Working as a mirror image of the IEC's Head Office, all data activities at the IEC HQ are replicated at Telkom's Data Centre in real time. In the unlikely event of disaster at IEC HQ, the DR site will take over all activities and the elections will proceed uninterrupted.

## **Additional Information:**

### Site and infrastructure detail

The integrated Telkom -designed voice and data solution to be used by the IEC during the 2016 Municipal Elections will help speed up some processes that might have taken several days in the past. Eliminating much of the earlier manual logistics and processing, the telecommunications solution assists in streamlining efficiencies in a cost-effective manner for the IEC.

South Africans from all over the country will make their way to the polling/voting station closest to where they reside on 3 August 2016. Their votes will be cast, ballot papers gathered and transferred to the respective Municipal Election Office.

Manual counting of the votes will occur at the voting stations. The count data will thereafter be scanned and transferred electronically to MEOs where data for all the MEOs in the applicable province will be collated, figures consolidated and in turn transferred electronically to the PROC then to NROC and simultaneously to the Disaster Recovery site at Telkom's Data Centre. At almost every stage of the vote counting process, the data is transferred to and presented in real time at the National Result Operation Centre, which is situated at the Tshwane Show Grounds.

The overall design of this customer and event specific solution consists of various core network and access technologies. Below are the details of the various sites and summary of what Telkom has provisioned for a successful election event.

### Fact Sheet

#### *Polling/Voting Stations*

Number = ~22 000

These stations are spread all over the country; from the most densely populated urban and suburban areas to the most rural of communities.

#### *Municipal Election Offices (MEO)*

Number = ~350

20 MEOs are connected to the applicable Provincial Results Centre (PROC) via satellite.

330 MEOs are connected to the applicable PRC via Telkom's VPNS platform. These sites have been upgraded to a minimum speed of 1 Mbps.

Basic Rate Interfaces (BRIs), ADSL and analogue telephone lines have been installed.

#### *Provincial Results Operation Centres (PROC)*

Number = 9

There is one Provincial Results Centre (PRC) in each province. Each PRC has two high speed 30 Mbps circuits that connect to the National Results Centre (NRC) and media.

SABC broadcasting network carries 25Mbps and 50Mbps at PROC and connects to NROC and SABC HQ Auckland Park at 400Mbps.

A point-to-point high speed Diginet-linked PRC connects to the local SABC office.

Total of 24 newly provisioned Primary Rate Interfaces (PRIs) provide voice services for the PRCs.

Each PRC has been supplied with an IP PABX Business System.

Basic Rate Interfaces (BRIs), ADSL and analogue telephone lines have been installed.

*National Result Centre (Tshwane Show Grounds)*

Number = 1

This is a temporary site at the Tshwane show grounds constructed specifically for the elections.

All telecommunications facilities are connected to the NRC via a Telkom Mobile Exchange, which is situated at the Tshwane show grounds.

The Telkom Mobile exchange offers a fully redundant optic fibre connection to two different Telkom exchanges. Each fibre connection has bandwidth capacity of 2.5 Gbps connecting to Telkom's core network.

Basic Rate ISDN Interfaces (BRIs) have been provided for the SABC radio stations for broadcasting purposes. Additional BRIs were installed on site for the outside broadcast vehicles of SABC, etv, BBC, PRIMEDIA and other media.

ADSL facilities have also been provided for local and international print media.

A PABX business system has been provided.

Basic Rate ISDN Interfaces, ADSL and analogue telephone lines have been installed.

Nine PRIs and two business PABX systems will ensure telephony connectivity to the temporary site. Over 600 telephone extensions will serve the requirements of the IEC offices, eNCA, SABC, various political parties, local and international print media, multiple radio stations and other service providers housed at the NRC during the event.

**For further enquiries, please contact:**

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**ABOUT TELKOM:**

Telkom is a leading communications services provider in South Africa. We had consolidated operating revenue of R37.3 billion and normalised profit after tax of R4,052 million for the year ended 31 March 2016. Total assets amounted to R46.8 billion and equity attributable to the owners of Telkom to R26.1 billion as of 31 March 2016. The group generated normalised free cash flow of R3.9 billion for the year ended 31 March 2016.

As of 31 March 2016, we had approximately 3.2 million telephone access lines in service and 1,077,939 ports connected via MSAN access. We offer business, residential and payphone customers a wide range of services and products, including:

- fixed-line retail voice services using PSTN (Public Switched Telephone Network) lines, including ISDN (Integrated Services Digital Network) lines, and the sale of subscription based value-added voice services and calling plans;
- fixed-line customer premises equipment rental and sales services both voice and data needs and these include PABX, Computers, Routers, Modems, Telephone handsets and other ancillary equipment;
- interconnection services, including terminating and transiting traffic from South African mobile operators, as well as from international operators and transiting traffic from mobile to international destinations;
- fixed-line data services, including domestic and international data transmission services, such as point-to-point leased lines, ADSL (Asymmetrical Digital Subscriber Line) services, packet-based services, managed data networking services and internet access and related information technology services;
- Data Centre Operations includes e-commerce, application service provider, hosting, data storage, e-mail and security services;
- W-CDMA (Wideband Code Division Multiple Access), a 3G next generation network, including fixed voice services, data services and nomadic voice services;
- mobile communication services, including voice services, data services and handset sales through our mobile brand called Telkom Mobile;
- information and communication services including cloud services, infrastructure services, workspace services, global service integration management and hardware and network equipment sales locally, in seven African countries, the UK and Dubai through Business Connexion Group; and
- other services including directory services, through Trudon (Pty) Ltd, wireless data services, through Swiftnet (Pty) Ltd.
- Convergence is one of our key strategic initiatives in building a sustainable future for Telkom. We will lead the provision of converged services in South Africa in support of our mission statement: Seamlessly connecting people to a better life.