

# Using cloud services to respond to the production challenges of Covid-19

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# RTÉ Technology

Over the last few years, RTÉ has invested significantly in on-site infrastructure built with Hybrid cloud principles in mind.

## Compute



- RTÉ's private cloud, "Nebula", provides compute and high speed storage for the majority of RTÉ applications and systems, and has replaced over 700 physical servers so far.
- Built to scale quickly to cater for increases in demand.

## Network



- Core campus network replaced with a high-speed flexible design - providing +100Gpbs connectivity to all system networks.
- Regional network upgraded from basic AV links managed by 3rd party to flexible IP connections managed by our network team
- Edge network replaced with scalable direct connection to INEX – Starting at 200Gpbs.

## Storage



- RTÉ's hybrid storage cloud is designed to provide low-cost high-capacity object storage on-site as well as in public cloud providers.
- Storage location will be invisible to tenant systems.
- Tender was accelerated to provide 1PB of storage by end of year.
- Scaling to 4PB by June next year.

## Applications and Systems



- Focus on providing browser based tools in addition to normal production tools.
- Rolls out IP based contribution devices
- New cameras that support remote upload and direct streaming.
- Modern and more secure authentication methods (SSO, SAML2 and 2FA)
- Developing workflows to take advantage of browser based tools.

# RTÉ Technology

The global pandemic, and associated lock-down presented significant challenges for live and non-live production.

RTÉ is considered an essential service and people rely on RTÉ for up to date and accurate information – The show must go on!

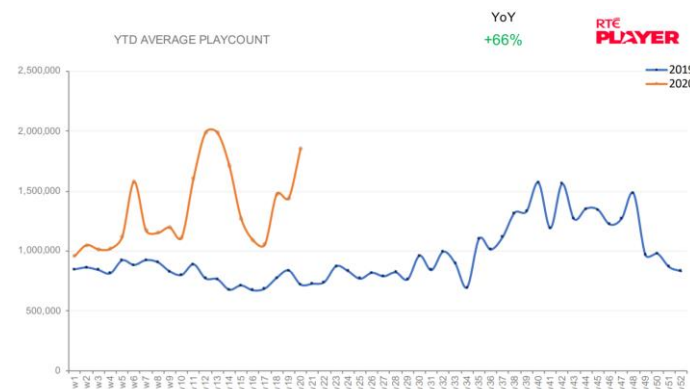
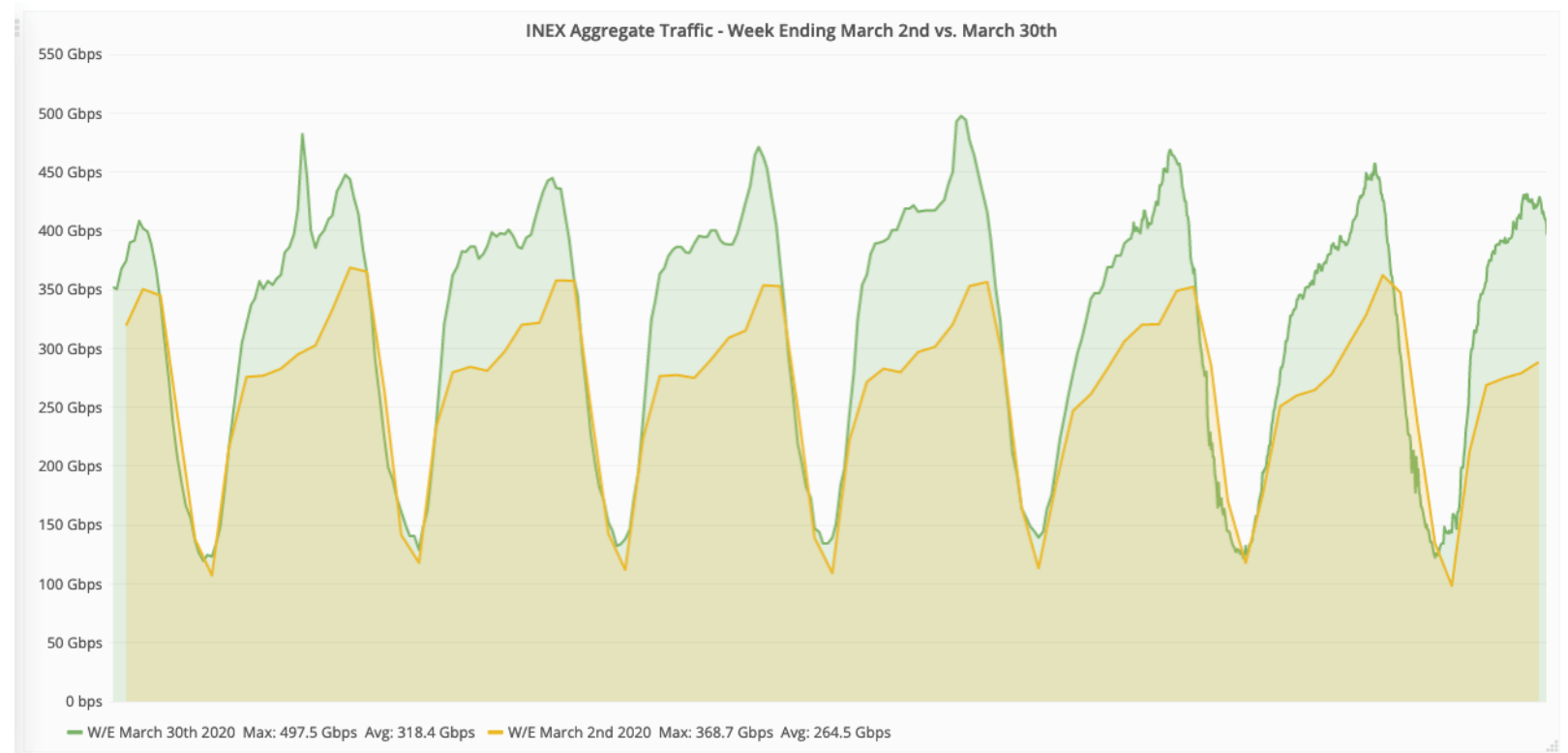
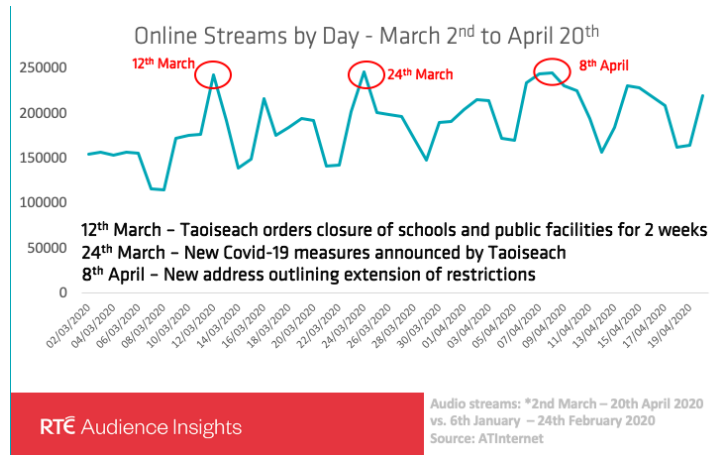
How do we allow as many as possible production staff to continue working remotely?

How do we ensure up to date news on government announcements reach all our readers / listeners / viewers

How do we cope with the radical changes in production and broadcast schedules?

How do we move from being an organisation where the majority of staff work on site to being an organisation where the majority of staff work remotely?

We could not afford to stop producing - The demand for RTÉ news and entertainment content increased significantly as a result of Covid-19 – Especially on online platforms



All Ireland internet traffic

# RTÉ Technology

Over a 2 week period RTÉ Technology enabled over 80% of (~1500) staff members to work from remote locations around the country.

## Office Staff

- Move non-production staff to “remote working”
- Teams, SharePoint and office 365 suite
- Citrix NetScaler running in private cloud
- Browser tools published using Cloudflare and Azure AD –no VPN required
- Applications published through NetScaler – no VPN required

## Non-live production

- Audio and control applications accessed through NetScaler or browser – no VPN required
- Browser tools published directly – no VPN required
- Remote desktop access to Avid and Graphics tools – VPN traffic prioritised
- Video streaming solution for producers monitoring studio from home.
- Experiments with Avid and Adobe tools running in private and public clouds.

## Live Production

- Minimise amount of staff on site. Tools that could work remotely made available to staff
- Increased use of audio and video over IP devices to allow presenters to work remotely
- Additional DR Studios in remote locations
- Talkback / intercom over phone networks

## Broadcast

- Increase in non-live content – acquired and produced.
- Control room and automation tools tested and ready for remote access (DR scenario)
- Increased streaming and simulcast of news content and live government briefings to OTT player and all social media platforms.
- Increased access services – Live sign language from remote locations

# RTÉ Technology

RTÉ will continue to develop new, flexible and lightweight ways of producing content – both live and post-produced

- We could not have responded so rapidly without the investments we made in our cloud infrastructure
- Cloud infrastructure and services will play an increased role in these new ways of working.
- Collaboration with vendors, public cloud providers other EBU members will be a key way to make this work.

