

# PROFESSIONAL SERVICES:

## SPOTLIGHT ON THE NETWORK ATTACHED STORAGE

### Overview

Professional Services (PS) is an important offering among a wide array of media connectivity technology and solutions that Lynx Technology provides for media enabled devices offered by many of the world's biggest brands across North America, Europe, and Asia. This is certainly the case with a varied range of network attached storage (NAS) devices offered by today's leading manufacturers.

Led by a team of top engineers and media experts, Lynx Technology offers a range of PS solutions across media, cloud, and mobile products and services for engagements ranging from short-term projects to longterm partnering.

Lynx Technology's expertise is unmatched in device and digital media discovery, digital media management, and digital media consumption solutions. No matter how large or complex a PS engagement may be, we deliver measurable value for digital media solution initiatives and have a strong track of success working with leading NAS manufacturers.

### Lynx Technology Provides PS for These Industry Segments:

- › Network Attached Storage Manufacturers
- › Router and Gateway Manufacturers
- › Application Developers
- › Content Providers
- › Set-top Box and TV Manufacturers

## Professional Services Combined with Twonky™ Technology

Media sharing capabilities is one of the most important functions for today's consumer storage products. Lynx Technology's proven Twonky technology enables reliable media sharing in the connected home. (Twonky was first introduced in 2004 and has maintained its status as the industry's most innovative and reliable technology available today.)

### Integration Services

We have extensive experience integrating Twonky Server in a wide range of NAS devices, including recent models featuring personal cloud capabilities. We understand that such integration projects can get fairly complicated with interactions between the product owners (the NAS manufacturer) and the OEM. In these types of PS engagements, we manage the complete chain of media server integration — ranging from generating the executable, through integration, to functional verification and acceptance testing, up to UPnP and DLNA certification.

### Customer Use Case: **Advanced Technical Integration, Transcoding**

Members of the Lynx Technology PS team recently completed an engagement to integrate a hardware transcoding solution into the media server so that other DLNA clients would be able to consume the content regardless of the original content format. For this project, we led a collaboration with multiple parties involved, including the product owner (one of the world's largest telecom service providers, the integrator, the device hardware manufacturer, UI developers, and the developer of the hardware transcoding solution. As the industry's leading expert for network media sharing capabilities, Lynx Technology was assigned the primary responsibility for ensuring a seamless user experience whenever users consumed stored content. To enable this, stored content is dynamically transcoded and available on-the-fly through the control of our media server. We were able to successfully integrate Twonky Server into the NAS device's media server within the timeframe required. Doing so enabled the client's request to convert the video format to the best suitable format for the consumer's device, while ensuring an easy and seamless experience for the NAS customer.

### Professional Services Offered to NAS Manufacturers:

- » Integration services
  - DTCP-IP / PlayReady integration
  - Hardware advanced encryption standard (AES) integration
  - Tuner (live streaming) integration
  - Transcoding integration
- » Use of hardware accelerators
- » Twonky integration
- » Device analysis
- » Device interoperability
- » Interoperability tests and device adaptation
- » DLNA certification support
  - Optional: Lynx Technology can manage the relationships with DLNA and the certification vendor performing the actual certification testing
- » Verification and test procedures
- » Test / Quality assurance support or full execution



## Certification Services

Lynx Technology PS engineers can guide all the required steps for device certification. The first step is pre-certification testing where we confirm that the device is ready to be certified. This test will not only expose specific integration problems, but also general problems such as performance or stability issues. This important preliminary step will help ensure that problems don't show up later in the certification process, which can result in having to re-start the certification until it is approved. This can be very costly due to additional work to fix problems and having to pay the required fees for any additional certification tests. Not only are additional costs involved, but projected sales revenues are in jeopardy whenever certification problems result in target schedule release delays.

### Customer Use Case: PS Support to Remedy Certification Problems

One of the top three NAS manufacturers in the world recently contacted us because of a problem encountered during certification testing which the NAS manufacturer was unable to fix. The certification vendor (CV) responsible for certification testing on behalf of the DLNA organization had identified a problem that the NAS vendor and the OEM had not noticed during their preliminary certification testing. They tried but were unable to find the problem so therefore could not implement the necessary fix. This resulted in a delay between OEM, the NAS manufacturer, and the CV, causing them to miss a critical product release date (which adversely affected their post-Thanksgiving Day "Black Friday" sales in the U.S.). At that point, we were brought in to help; we were able to identify the problem and provide a quick and effective remedy. The root cause of the problem was a change in DLNA's certification test plan that required a configuration change, but neither the OEM nor NAS vendor had been aware of this change.

At Lynx Technology, we closely monitor changes to certification testing so that we can advise our NAS customers accordingly and help them be prepared for any changes so as to avoid potential problems and delays.

After rescuing their certification testing from recurring failures, this NAS customer has subsequently retained our services on an ongoing basis and has not experienced any certification testing problems like this again. Most important, they have avoided any further product delays and resulting product revenue disruptions.

## Acceptance Testing

Verifying that a NAS product complies with pre-defined requirements is an important milestone in every development process. Getting this right is imperative and a pre-condition for product success. However, without detailed domain knowledge it can be difficult to know what is important to test for and what is not. Another challenge can be knowing what adjustments are needed to make testing efficient without it becoming too expensive.

With our vast knowledge and experience in media sharing, Lynx Technology's world-class PS team can help define the right amount of acceptance test procedures to ensure that the device passes the final test and the acceptance for our customer, while staying within the prescribed budget. We not only help define the optimal acceptance test procedure but also in performing the acceptance tests and developing automatic regression tests, saving time and money for future platform releases.

## Customer Use Case: PS Support for Acceptance Testing

Following a corporate restructuring, a NAS manufacturer no longer had the full extent of internal resources to perform all the necessary product QA and verifications. The restructure left the company needing additional appropriate PS services to provide the necessary structure and resources for required deliverables. As part of a PS engagement with the NAS manufacturer, Lynx Technology established a set of acceptance test procedures and a way to document the acceptance tests and to communicate the successful completion of required tests on the final platform. Not only will this ensure a successful methodology for acceptance testing, but it fills the void for required internal resources after the restructuring. It also improves test results, ultimately reducing costs and overhead, and essentially eliminates risk of time-to-market product delays (thus protecting planned sales revenue) for the manufacturer.

## Summary

Lynx Technology's expert Professional Services staff have been providing professional services globally since 1998, working closely with the biggest consumer brands in North America, Europe, and Asia. We have successfully completed hundreds of large-scale PS engagements across media, cloud, and mobile products and services.

By engaging with Lynx Technology's PS, NAS manufacturers get access to an expert engineering team with a solid track record of quickly and effectively

providing premium support and guidance for the resolution of complex integration issues, certifications, device interoperability, and more.

**To learn more and to speak with a Lynx Technology staff member in your region of the world, contact us at [+1 855 LYNXTEC \(+1 855 596 9832\)](tel:+1855LYNXTEC) or [sales@lynxtechnology.com](mailto:sales@lynxtechnology.com)**