



# AGENDA

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SOAPAM COMPATIBILITY IN LIGHTWAVE PRODUCTS

02

AUTHENTICATION USER EXITS IN LIGHTWAVE PRODUCTS

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04

INTEGRATION SOLUTIONS!

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CUSTOMER STORIES

**THIS PRESENTATION CONTAINS FORWARD-LOOKING STATEMENTS AND PLANS THAT ARE SUBJECT TO CHANGE. WHILE WE AIM TO ACHIEVE WHAT'S OUTLINED HERE,**

**PLEASE UNDERSTAND THAT ACTUAL OUTCOMES MAY VARY.**

# SOAPam Compatibility in LightWave Products

# SOAPam is 20 years old!!

## (WHAT?)

### **NuWave Technologies Announces SOAP/AM 1.0 Web Services for HP NonStop Servers**

Nashua, NH -- June 1, 2003 -- NuWave Technologies, Inc. announces the release of SOAP/AM™, a “middleware” software product for HP NonStop Server systems. SOAP/AM™ allows customers to expose their existing Pathway servers as Web Services that can be accessed through the standard SOAP protocol over HTTP by client applications on virtually any platform.

SOAP is an XML-based standard for inter-application messaging promulgated by the Worldwide Web Consortium (W3C). It has received broad support from software manufacturers, including Microsoft, Sun, IBM and many others. Microsoft’s .NET development tools, for example, have built-in support for efficiently creating Web Service client applications. Online services Amazon.com and Google now provide access to their applications through Web Services. SOAP is quickly becoming the client/server protocol of choice.

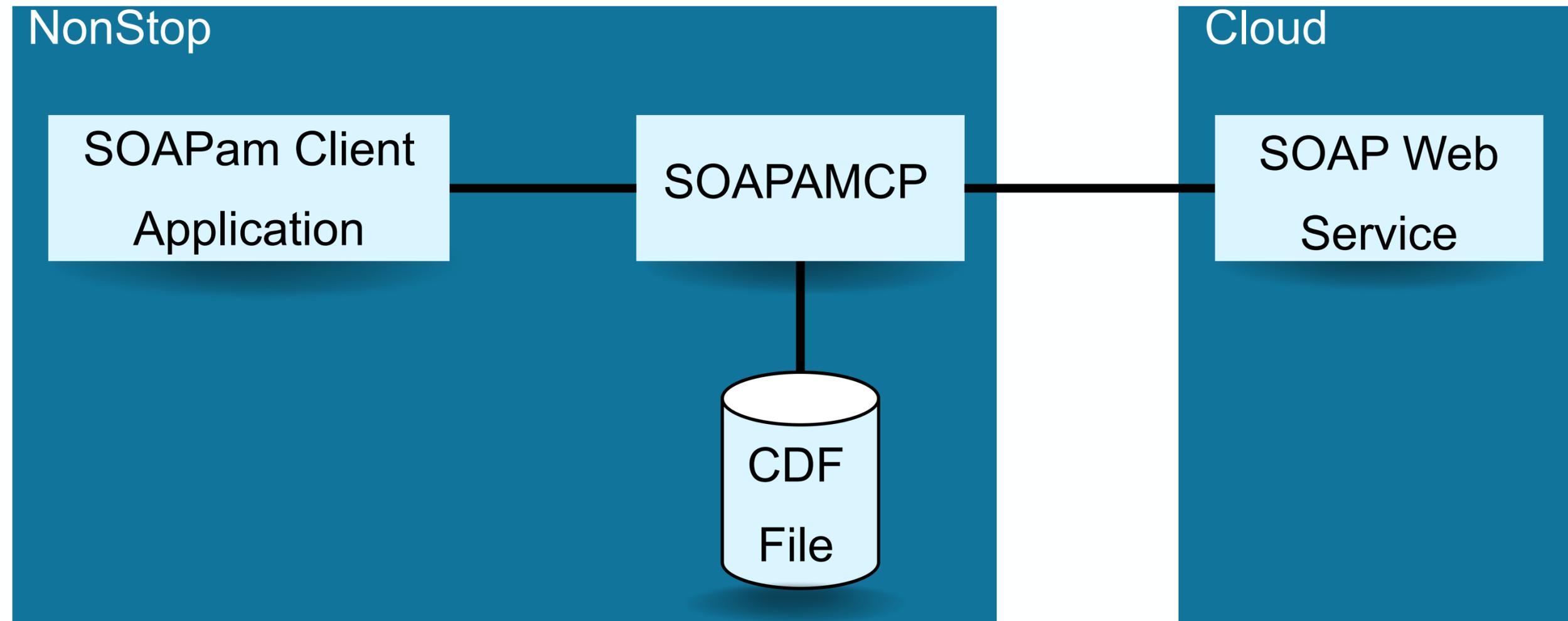
- **SOAPam End of Service Life in September 2024**
- **Some customers have migrated to REST / JSON using LightWave products**
- **But SOAP is still widely used, and customers are still using SOAPam in mission critical applications.**

**What if customers could continue to use SOAPam applications while transitioning REST / JSON for new development?**

# The Solution...

**Introducing SOAPam compatibility in LightWave  
Products!**

# Existing SOAPam Client application



## 1. Use LWCCOM to convert SOAPam CDF to LightWave API

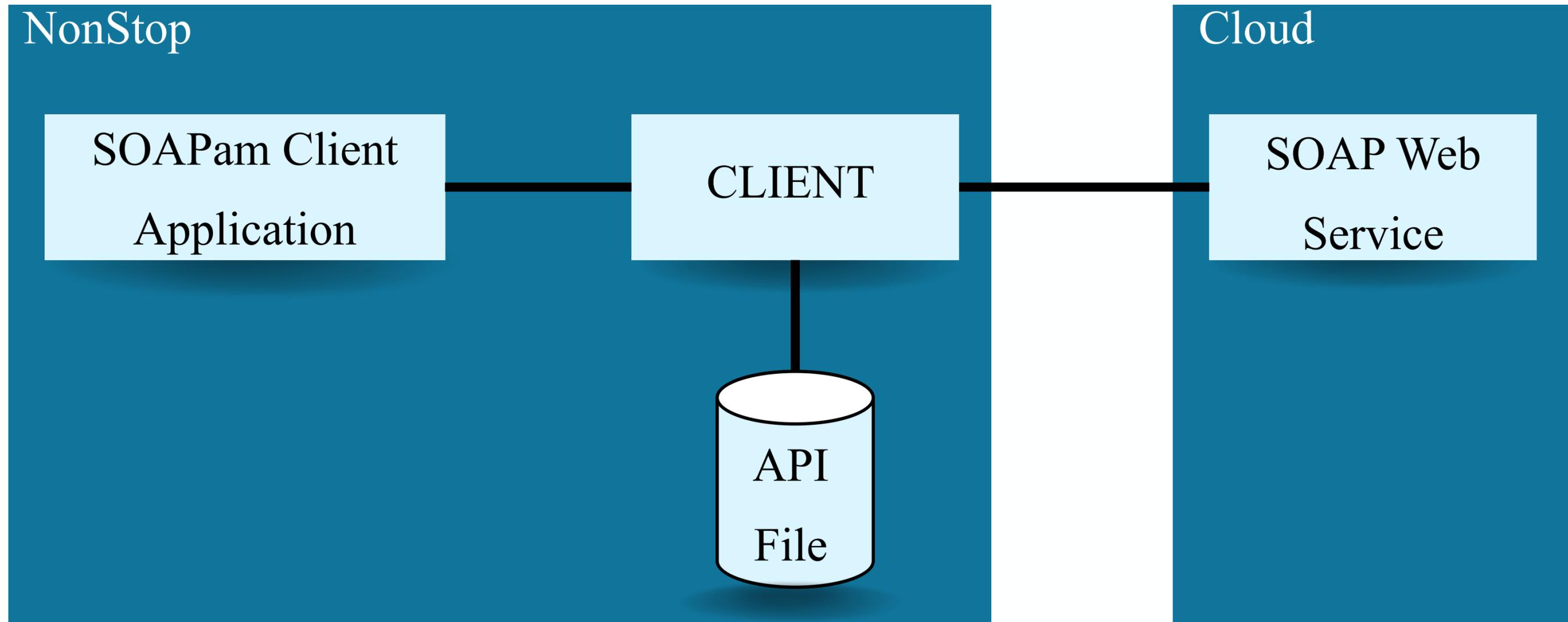
```
tacl > run lwccom ; convert cdf echocdf, format api, file echoapi
```

## 2. Make minor changes to SOAPAMCP serverclass configuration

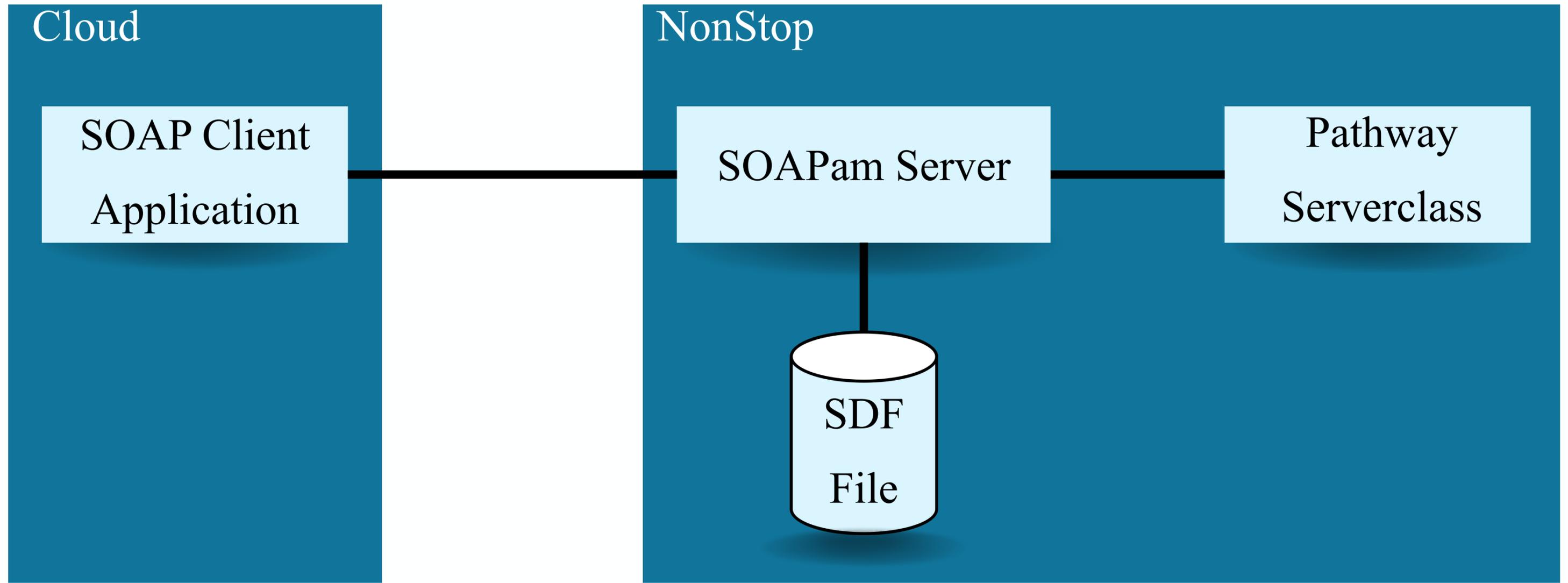
```
SET SERVER PARAM SOAPAMCP-MODE 1  
SET SERVER PARAM API "ECHOAPI"  
SET SERVER PARAM LOGCFG +LOGCFG  
SET SERVER PARAM BASE-URL "HTTPS://API.EXAMPLE.COM"  
SET SERVER PROGRAM CLIENT  
ADD SERVER LWCECHO
```

**NO CHANGES TO CLIENT APPLICATION CODE!**

# LightWave Client in SOAPam Client compatibility mode



# Existing SOAPam Server application



# 1. Use LWSCOM to convert SOAPam SDF to LightWave API and Dictionary

```
tacl > run lwscom ; convert sdf echosdf, format api, file echoapi  
tacl > run lwscom ; convert sdf echosdf, format dictionary, file echodict
```

# 2. Import into LightWave Server and deploy as service

**NO CHANGES TO CLIENT APPLICATION CODE!**

### Deploy a New Service

Name\*  
soapam-compatible-service

---

Description\*  
A service converted from a SOAPam SDF

---

Version\*  
1.0

---

API\*  
my-converted-soapam-service

---

Access Control Policy\*  
allow-any-authenticated-user

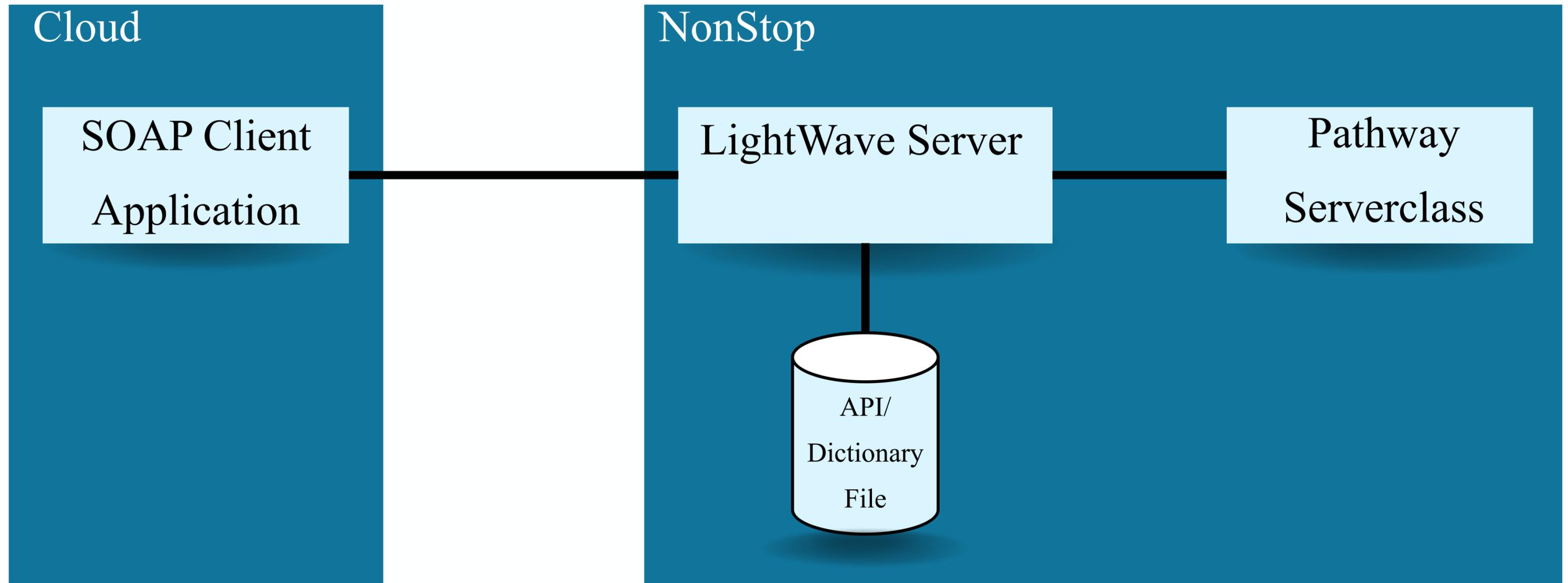
---

TCP/IP Port Range (leave blank for all ports)

Enable this service

CANCEL CREATE

# LightWave Server in SOAPam Server compatibility mode



## Is this a full SOAP Server / Client solution?

- No, it offers compatibility with SOAPam applications
  - We're exploring a fully featured SOAP solution on the LightWave platform.
- Let us know if you're interested!

# Availability

- Client compatibility

- Early adopter testing underway now
- GA in Q4

- Server compatibility

- Early adopter testing in Q4
- GA in Q1-24

# Authentication User Exits in LightWave Products

# Authentication in LightWave products

LightWave Server supports HTTP Basic / Digest Authentication

... it's not enough

LightWave Client supports HTTP Basic / Digest authentication and mTLS.

... still not enough

# Customers need to authenticate with ...

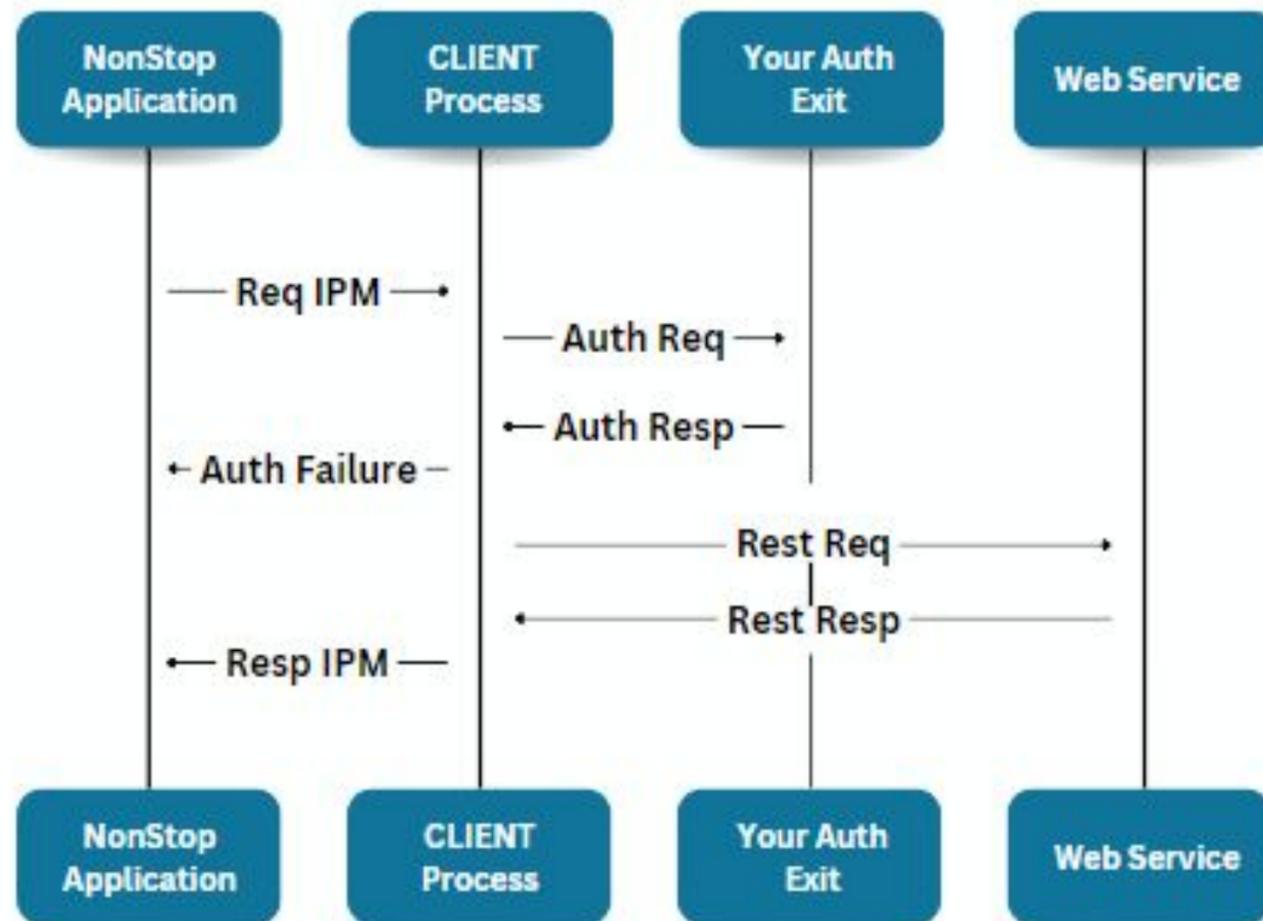
- Safeguard
- Active Directory
- Third party authentication providers, both on and off NonStop

# The Solution ...

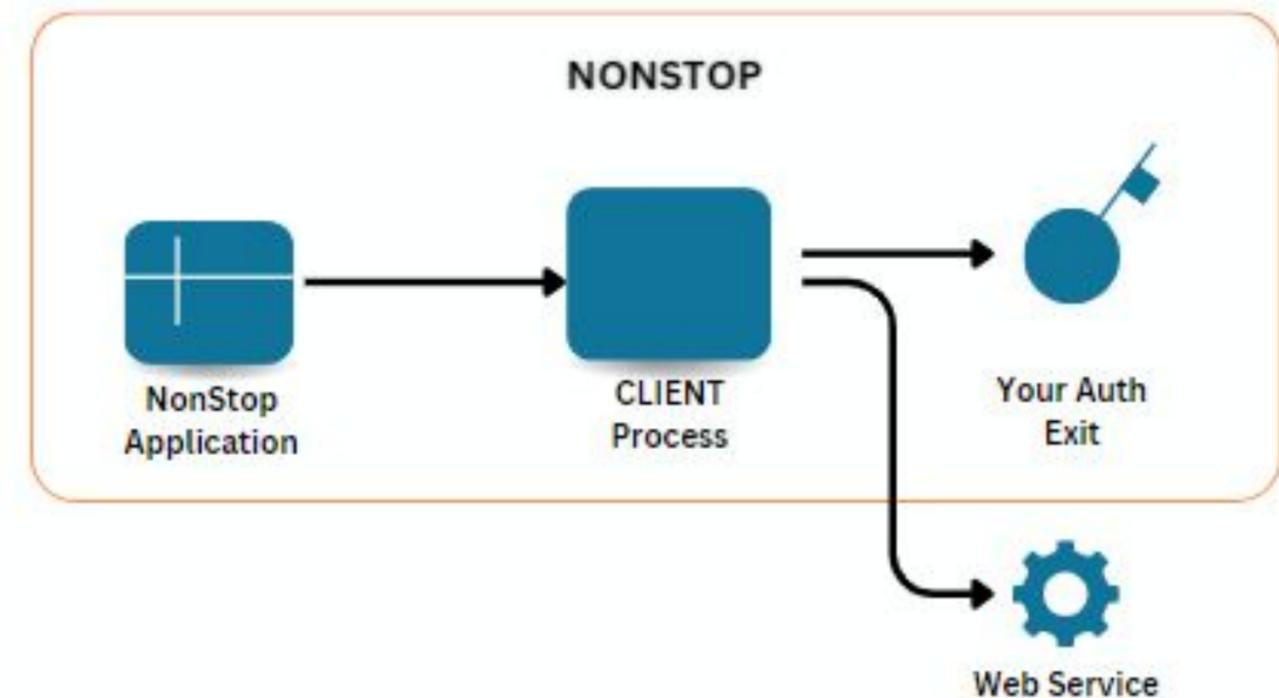
- LightWave is a web service integration platform.
- Don't try to be "all things"...
- Provide the ability to plug custom auth exits into the platform
- Where appropriate, provide the plug-in off the shelf.

# Authentication Exits in LightWave Client

LightWave Client Authentication Exits

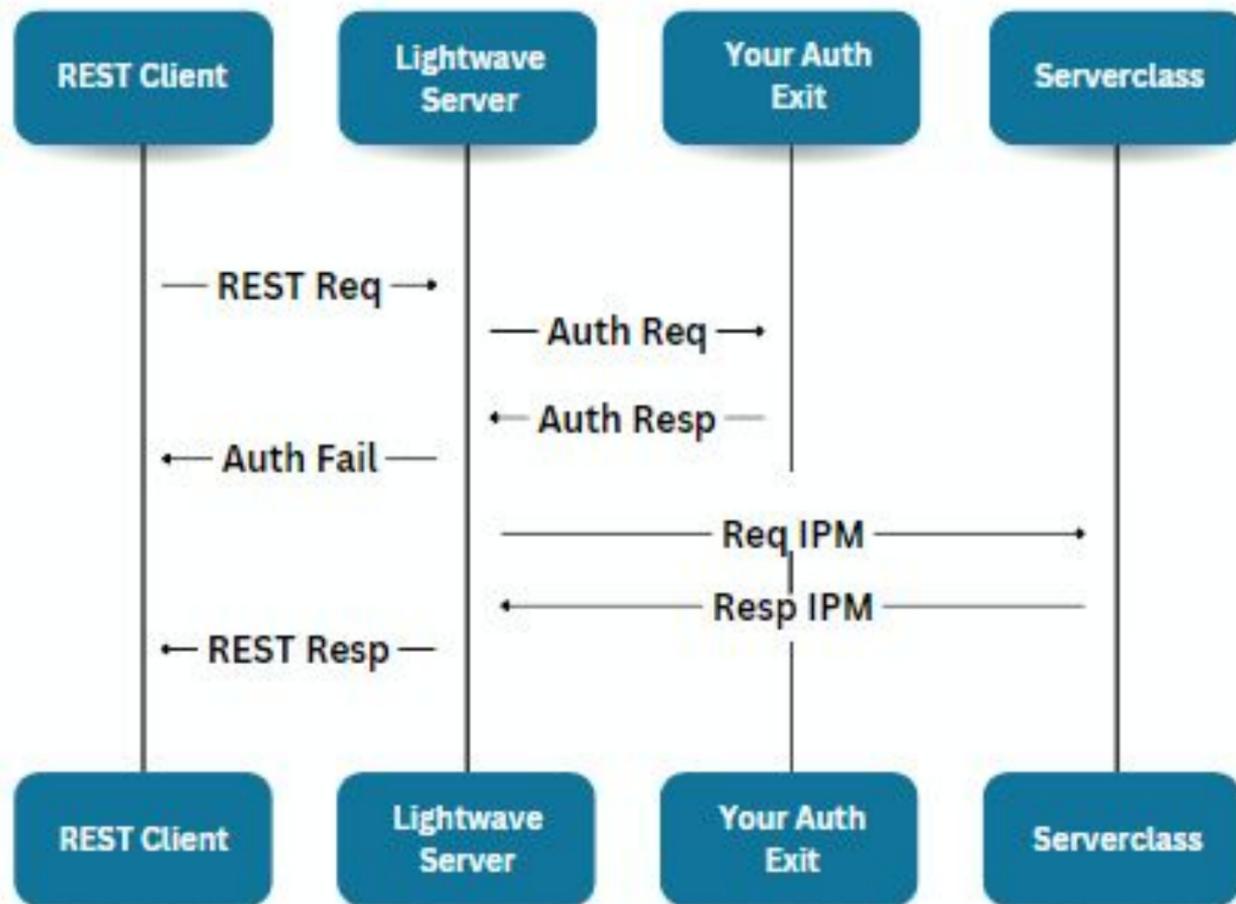


LightWave Client Authentication Exits

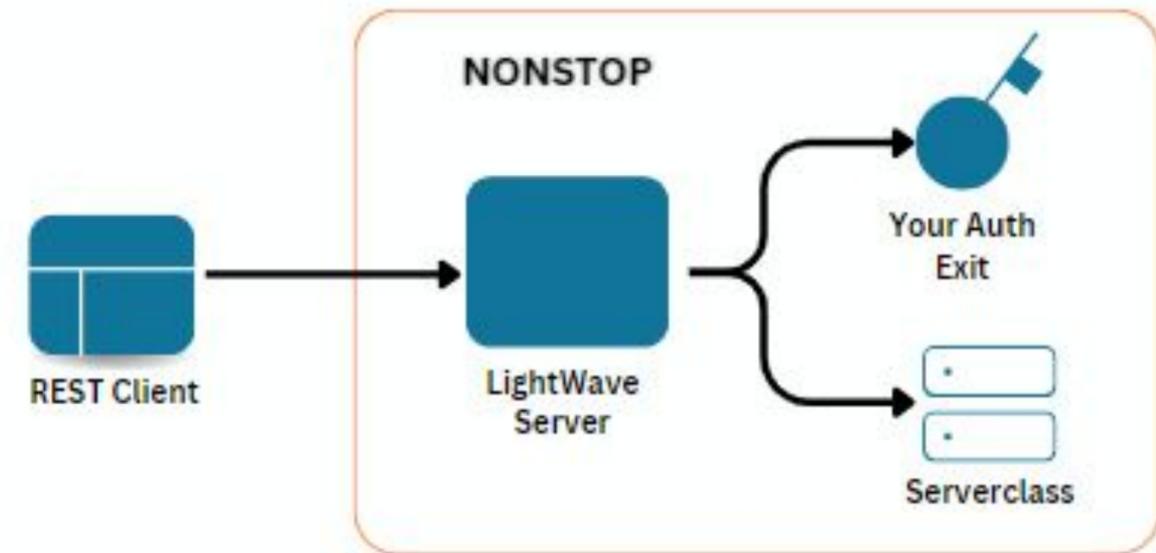


# Authentication Exits in LightWave Server

LightWave Server Authentication Exits



LightWave Client Authentication Exits



# Availability

## - Client

- Looking for adopters
- GA end of Q4

## -Server

- Looking for adopters
- GA end of Q1

# Anybody heard of ISO 20022?

- International Standard: Developed by the International Organization for Standardization (ISO).
- Financial Communication: Aims to standardize the way financial institutions communicate electronically.
- Rich Data Exchange: Allows for the sharing of more structured and detailed metadata compared to older systems.
- XML-Based: Utilizes XML schema definitions for easier integration and data manipulation.
- 3500+ messages defined by publicly available XSD (XML Schema Definition)

# Do LightWave products support ISO 20022?

- LightWave Server: No ... XML not currently supported
- LightWave Client: Sort of ... XML is supported, but creating API definitions for ISO 20022 is challenging.

# The Solution...

## Introducing ISOHub 22!

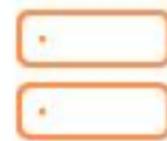
*Powered by LightWave*

- ISOHub 22 enables secure ISO 20022 message exchanges between applications on NonStop servers and partners on any platform, utilizing RESTful interfaces.
- Gain a competitive edge in the financial industry by adopting ISO 20022 messaging for cross-border payments. As large companies set deadlines for ISO implementation, and with Swift's payment messages transitioning to ISO 20022 starting March 2023, now is the ideal time to modernize your payment infrastructure.
- Stay ahead of the curve by ensuring your financial institution is ISO 20022-compliant before upcoming deadlines set by Swift and the European Central Bank. Acting proactively ensures seamless operations and keeps you in compliance with industry standards.



ISO 20022  
Messages

XML OR JSON



**NONSTOP SERVER**



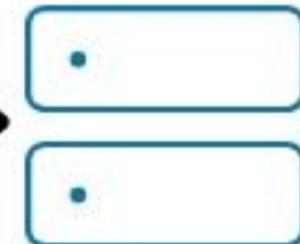
ISOHub

IPM

IPM



Payments  
switch

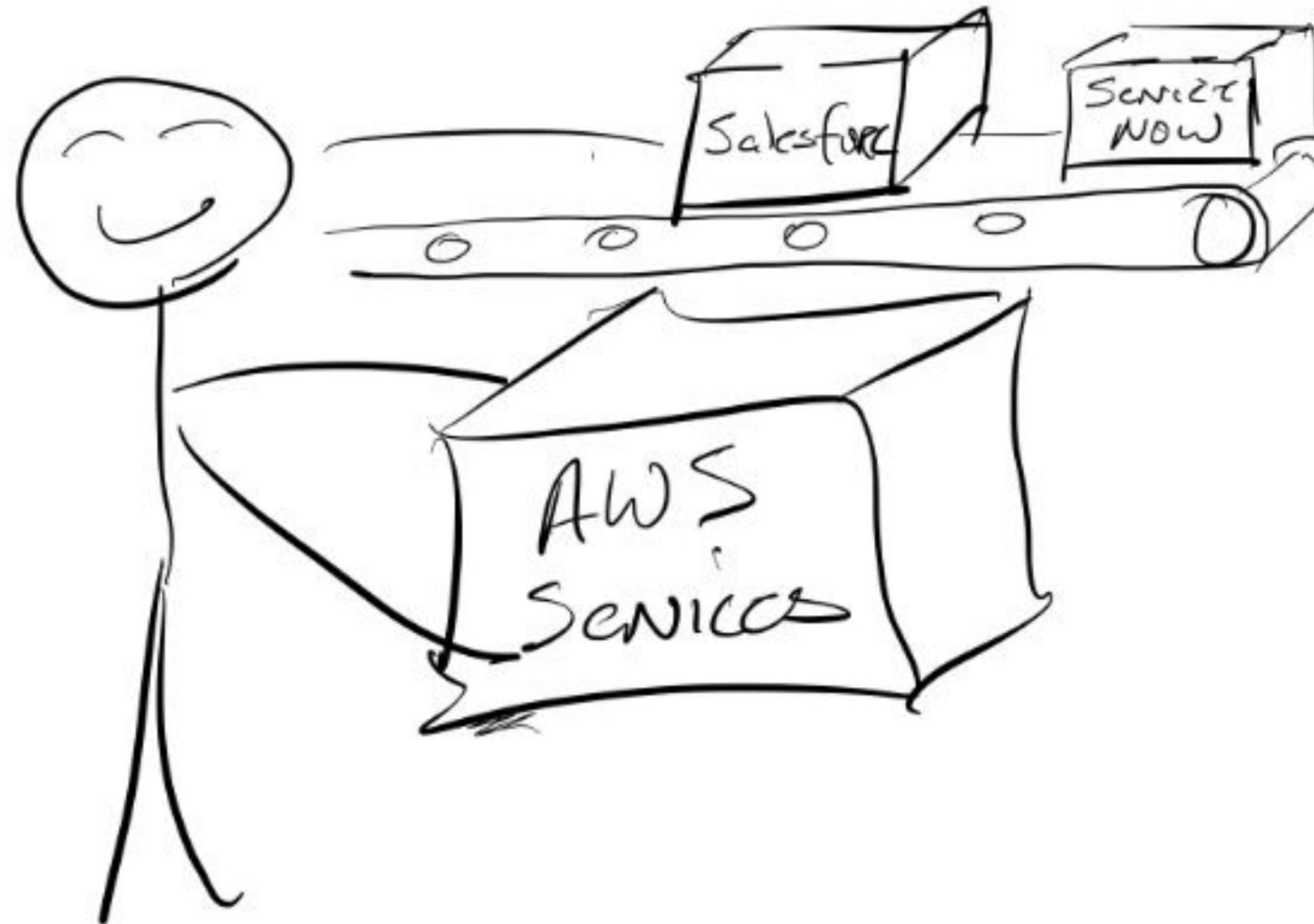


Pathway  
Serverclass

# Integration Solutions!

# Integration Solutions!

*Remember me?*



AWS Simple Storage Service (S3) ignited the popularity of S3-compatible object storage services.

Other offerings like HPE GreenLake provide "S3 API-compatible" storage options.

S3 serves as the gateway to AWS's suite of database and analytics tools, such as Glue, Redshift, Athena, and Quicksight.

However, S3 access from NonStop platforms, particularly Guardian, poses challenges.

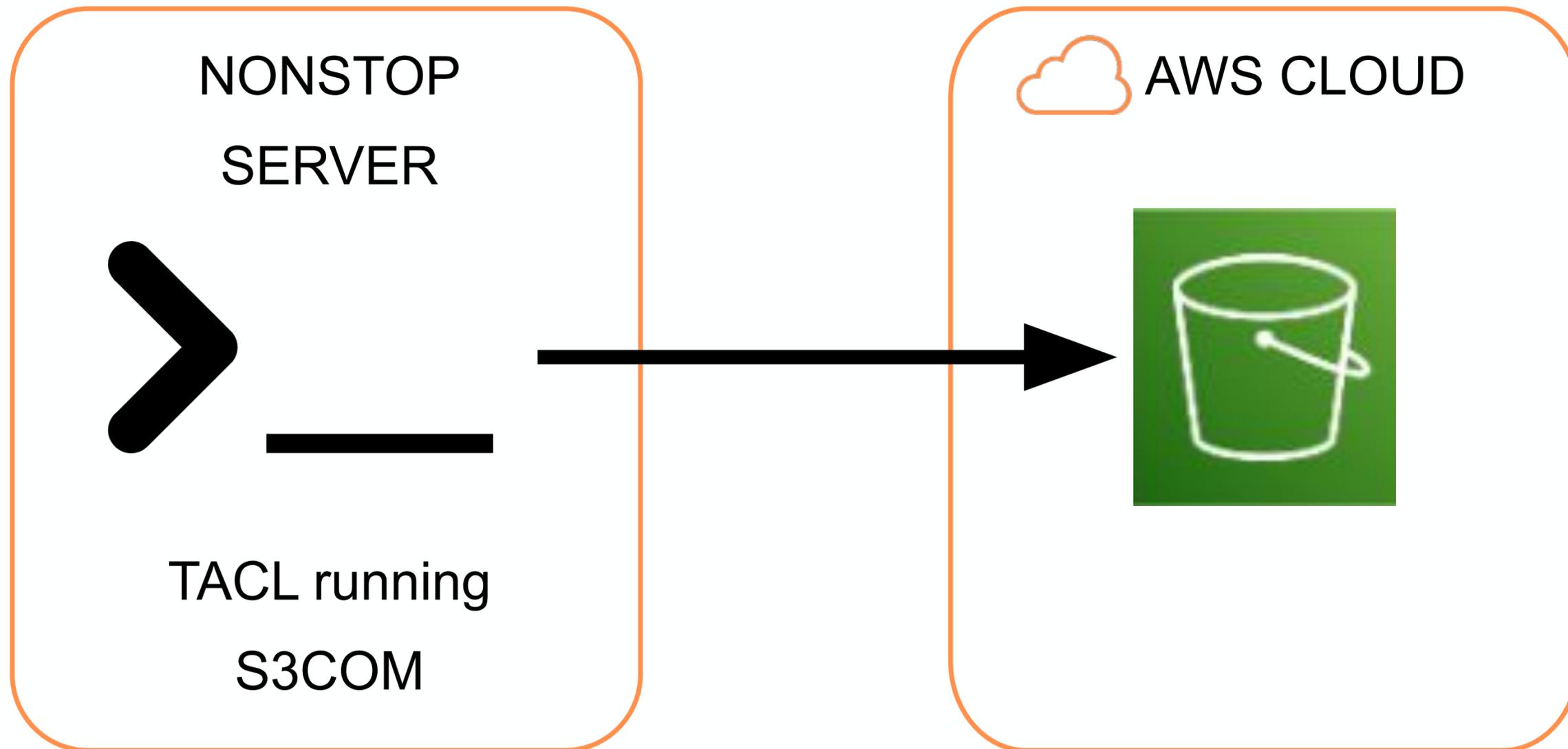
The Solution...

Introducing S3 Utilities!

- S3UTILS provides a complete solution for integrating with S3 storage from the NonStop
- Provides integration with S3 storage in both the batch and OLTP Guardian environments out of the box.

- The S3COM utility provides a command line interface to S3 storage which is compatible with the Guardian COM program model.
- This allows the program to be driven by batch scripts written in TACL.
- After some simple configuration, you can transfer files to and from S3 storage.
- The utility also provides the ability to copy, list, delete, or move objects within the object store.

# CLI access to S3



```
9> run s3com
```

```
S3COM
```

```
Copyright (c) 2023 NuWave Technologies, Inc. All rights reserved.
```

```
S3COM 1-> ls
```

```
2023-01-07 14:56:33 nuwavetech-demo-acme-card
```

```
2023-01-08 10:35:31 nuwavetech-demo-certificates
```

```
2023-04-22 06:15:54 nuwavetech-demo-redshift-import
```

```
S3COM 2-> ls s3://nuwavetech-demo-acme-card
```

```
2023-01-07 12:52:37 2380 app.css
```

```
2023-01-07 12:52:37 29110 app.js
```

```
2023-01-07 12:52:37 419 favicon.ico
```

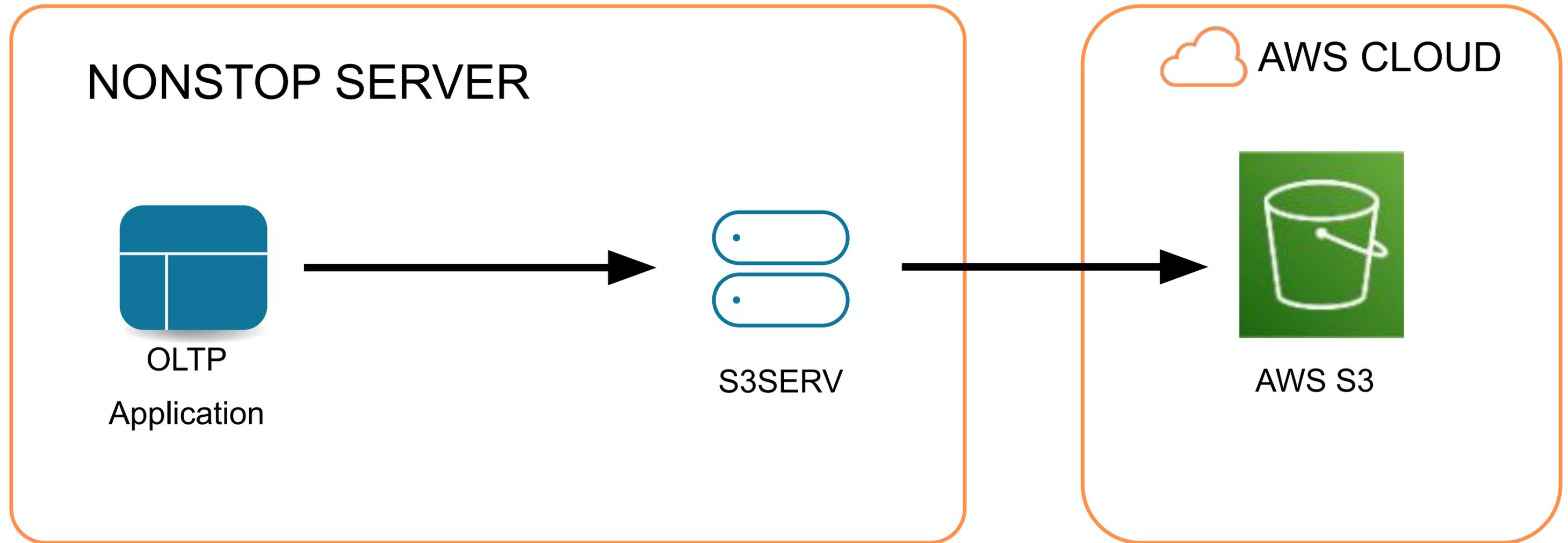
```
2023-01-07 12:52:37 35061 index.html
```

```
2023-01-07 12:52:37 63 settings.json
```

```
S3COM 3-> cp txlog s3://nuwavetech-demo-redshift-import/
```

```
upload: ./txlog to s3://nuwavetech-demo-redshift-import/txlog
```

# OLTP access to S3



- The S3SERV process can be deployed as a standalone server or TS/MP serverclass.
- Provides integration with S3 object storage services via a simple IPM based application programming interface.
- Allows existing or new NonStop applications to integrate with S3 storage as part of their online transaction processing.

# Availability

- Looking for adopters
- GA end of Q4

# Customer Stories

## European Bank Project

We partnered with a European bank to create a new transaction flow, leveraging both REST technology and their existing HP NonStop applications.

Our LightWave Client solution generated the necessary interprocess message structures for easy integration into the bank's existing application. This also included seamless integration with an in-house token-based authentication service. After successful volume testing in the project's acceptance phase, the bank is gearing up for launch.

The bank is now exploring additional revenue opportunities through LightWave REST integrations and considering upgrading existing transaction methods to modern HTTP-based REST interfaces.

## EU Payments Switch Project

As financial institutions embrace open APIs and adapt to regulations like PSD2, the demand for innovative transaction pathways for Issuers and Acquirers is on the rise.

The EU Payments Switch leverages our LightWave Server product to offer REST-based account verification, addressing this surge in demand effectively. This enables new and emerging institutions to benefit from REST-enabled services.

The reusability of existing NonStop application code stands out as a key advantage, streamlining the integration of new tech solutions.

## Migration Path with LightWave Products

Our client has been using our SOAPam product suite as a key part of their communication stack. NuWave now offers a seamless upgrade path that doesn't disrupt existing SOAPam implementations.

With a compatibility mode in our LightWave products, existing applications continue to function as-is, while also enabling the development of new, modern REST-based applications. This hybrid mode allows the client the flexibility to transition to REST at their own pace, operating both old and new systems simultaneously.

# And there you have it!

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**And there you have it!**

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[github.com/nuwavetech](https://github.com/nuwavetech)