

Python in Deployed Classes

How to use Embedded Python from
Embedded ObjectScript Classes



Agenda



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- 1 **Reported Problem**
 - 2 **Underlying Issue**
 - 3 **Needs and Goals**
 - 4 **Example Solution**
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Reported Problem



- MakeClassDeployed **Breaks** Classes with Embedded Python
 - Roche uses:
 - \$SYSTEM.OBJ.MakeClassDeployed(<classname>)
 - Delete .MAC and .INT if generated

Root Cause



- **Python byte code**
 - not portable
 - Very fragile to changes
 - From version to version
 - From OS
 - From Processor
 - Designed to be cached on currently running instance
 - Often purged and Rebuilt
 - Requires Source code to be present
- **ISC tried** saving it in ^rPYC() global
 - Python would not use it
 - Not portable with ECP
 - Not a working solution
- MakeClassDeployed
 - Defect: deletes the .py from ^ROUTINE

Needs



- Distribute IRIS Code
 - Without Source code
 - Without need to recompile on deployment
- Allow use of Python
 - External Python libraries
 - Custom Python code
 - Mostly to make use of external libraries
 - Distribute without source (!?)
 - As seen in previous slide, this is an issue with Python itself.
- *Not a requirement*
 - Have IRIS classes with Mixed IRIS and Python code

Proposed Solution



- Keep Python Code and IRIS classes separate
- Outside of IRIS
 - Python libraries (boto3, etc)
 - Custom Python code
- Compile the python code
 - Cython
- Organize the code as libraries
 - Install the libraries with Wheel
- Import and call the compiled libraries from IRIS ObjectScript

Thank you

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