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At 18North, Pune, we see ourselves to be a trusted, valued, conscious and sustainable *digital services partner* in the select service areas and the domains.

18North

Application Tech Upgrade: Python Migration

Application Tech Upgrade: Python Migration from 2 to 3



CUSTOMER ORGANIZATION

Customer is a ISO & compliance consultant, having years of strong experience in management of systems, systems standards and development.



REQUIREMENTS

Switch to the Python3 in order to get better performance, enhanced features and long term security and maintenance support from the official python releases. Also to secure the application from being exploit by potential security attacks.



APPROACH

For migrating an application from Python 2 to 3, we have chosen “multi-staging” approach with the automated migration tools in python.



SOLUTION OVERVIEW

Migrated a single business module of an application in Python 2.7 into Python 3. Dropped the backsupport for Python 2 by applying the code fixes and resolving the differences using migration tools. The solution overview is as follows:

- **Research and analysis-** We gone through the documentations provided on Python’s official website and other developer community forums such as StackOverFlow, StackExchange, Git forum, etc. for the detail guide on migration, approach to be followed and planning strategy. The referred links are:
 - <https://docs.python.org/3/howto/pyporting.html>
 - <https://www.stxnext.com/blog/python-3-migration-guide/>
 - <https://stackoverflow.com/questions/59188902/for-python2-to-python3-code-conversion-which-version-of-python-django-best-su>
 - <https://medium.com/datadriveninvestor/migrating-python-2-x-to-3-x-65cca44814e>
 - <https://app.pluralsight.com/library/courses/python-2-to-python-3/table-of-contents>
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- **Plan a strategy**- Based on the guidelines provided in the docs and the application size we have to choose an appropriate approach for the migration.
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- **Prepare with the tools**- 2to3, Futurize, tox
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- **Pilot**- Applied the migration on single module in the new python environment.
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- **Refinement and reinforcement in the process**- On the completion of the pilot, the process will become more clear well defined.
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- **Migrate application**- Entire application migration.



BENEFIT TO THE BUSINESS

Migrating application from Python 2 to 3 has wide range of tangible benefits to the businesses, some of the major benefits are:

- More efficient and performant application
- Secured and threat proof softwares
- Rich developer support
- Open to advanced features
- Low cost on maintenance and support
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