**402 – Cloud Solutions**

# Section 1: Foundational Cloud Concepts

**Compare and contrast the various cloud business models and technologies**

<https://support.f5.com/csp/article/K14826>

<https://support.f5.com/csp/article/K14810>

<https://wtit.com/f5-good-better-best-licenses/>

[https://fourweekmba.com/cloud-business-models/ [fourweekmba.com]](https://urldefense.proofpoint.com/v2/url?u=https-3A__fourweekmba.com_cloud-2Dbusiness-2Dmodels_&d=DwMFaQ&c=cehHn3YFTvbeqmBOizlVwndgdnPducYBouAyYX7fXYg&r=jUeFPfqgzrx_OsOhM0zDEUfWI3kGpoRpEOmb0DRdZBsCd_FxCUG3hd_qK4Zgzqj8&m=P44fY8KoR5YhZhzhsOkMxsibIMAUfhZHRDXnF3On2MxsIhoCUSbPBtL8pywGPjgH&s=D_7U0kARcF3Au7Gvp9LKn0dzH_seuNk1C3JiavU7gk4&e=)

[https://www.globalknowledge.com/us-en/resources/case-studies/why-you-need-to-treat-cloud-computing-as-a-new-business-model/ [globalknowledge.com]](https://urldefense.proofpoint.com/v2/url?u=https-3A__www.globalknowledge.com_us-2Den_resources_case-2Dstudies_why-2Dyou-2Dneed-2Dto-2Dtreat-2Dcloud-2Dcomputing-2Das-2Da-2Dnew-2Dbusiness-2Dmodel_&d=DwMFaQ&c=cehHn3YFTvbeqmBOizlVwndgdnPducYBouAyYX7fXYg&r=jUeFPfqgzrx_OsOhM0zDEUfWI3kGpoRpEOmb0DRdZBsCd_FxCUG3hd_qK4Zgzqj8&m=P44fY8KoR5YhZhzhsOkMxsibIMAUfhZHRDXnF3On2MxsIhoCUSbPBtL8pywGPjgH&s=82bUWheejLV47dwG3O00rHZSXOY4o-K-TcVVOGeHm_U&e=)

**Apply concepts related to cloud Identity Access Management technologies**

<https://www.f5.com/resources/white-papers/the-challenges-and-benefits-of-identity-and-access-management>

**Describe the terminology, modules, and technical requirements related to application bursting and mobility**

[https://www.f5.com/services/resources/white-papers/deploying-an-enterprise-mobility-gateway [f5.com]](https://urldefense.proofpoint.com/v2/url?u=https-3A__www.f5.com_services_resources_white-2Dpapers_deploying-2Dan-2Denterprise-2Dmobility-2Dgateway&d=DwMFaQ&c=cehHn3YFTvbeqmBOizlVwndgdnPducYBouAyYX7fXYg&r=jUeFPfqgzrx_OsOhM0zDEUfWI3kGpoRpEOmb0DRdZBsCd_FxCUG3hd_qK4Zgzqj8&m=P44fY8KoR5YhZhzhsOkMxsibIMAUfhZHRDXnF3On2MxsIhoCUSbPBtL8pywGPjgH&s=9W_CYKvc_5a1AKW-QOpeU3DUB2n_MO9-9dt7I4h2Tzc&e=)

**Apply concepts related to application bursting and mobility**

<https://www.youtube.com/watch?v=dDehuhrIE-c>

<https://www.f5.com/cloud/pricing#container1989174610>

# Section 2: Cloud Infrastructure Design

**Describe the F5 licensing and support characteristics for cloud deployments**

<https://clouddocs.f5.com/cloud/public/v1/licensing/licensing.html>

<https://clouddocs.f5.com/cloud/public/v1/matrix.html>

[https://www.f5.com/pdf/licensing/cloud-licensing-program-overview.pdf [f5.com]](https://urldefense.proofpoint.com/v2/url?u=https-3A__www.f5.com_pdf_licensing_cloud-2Dlicensing-2Dprogram-2Doverview.pdf&d=DwMFaQ&c=cehHn3YFTvbeqmBOizlVwndgdnPducYBouAyYX7fXYg&r=jUeFPfqgzrx_OsOhM0zDEUfWI3kGpoRpEOmb0DRdZBsCd_FxCUG3hd_qK4Zgzqj8&m=P44fY8KoR5YhZhzhsOkMxsibIMAUfhZHRDXnF3On2MxsIhoCUSbPBtL8pywGPjgH&s=-KqYMxqZDsO347RnYuT540enqJwDi0fuWSr8qKVJ33Y&e=)

[https://clouddocs.f5.com/cloud/public/v1/licensing/license\_perapp.html [clouddocs.f5.com]](https://urldefense.proofpoint.com/v2/url?u=https-3A__clouddocs.f5.com_cloud_public_v1_licensing_license-5Fperapp.html&d=DwMFaQ&c=cehHn3YFTvbeqmBOizlVwndgdnPducYBouAyYX7fXYg&r=jUeFPfqgzrx_OsOhM0zDEUfWI3kGpoRpEOmb0DRdZBsCd_FxCUG3hd_qK4Zgzqj8&m=P44fY8KoR5YhZhzhsOkMxsibIMAUfhZHRDXnF3On2MxsIhoCUSbPBtL8pywGPjgH&s=CPV_YmfvJ_z7X86dyawtVrAUU5EWaK8fVcwSEedGPCM&e=)

[https://www.f5.com/pdf/licensing/good-better-best-licensing-overview.pdf [f5.com]](https://urldefense.proofpoint.com/v2/url?u=https-3A__www.f5.com_pdf_licensing_good-2Dbetter-2Dbest-2Dlicensing-2Doverview.pdf&d=DwMFaQ&c=cehHn3YFTvbeqmBOizlVwndgdnPducYBouAyYX7fXYg&r=jUeFPfqgzrx_OsOhM0zDEUfWI3kGpoRpEOmb0DRdZBsCd_FxCUG3hd_qK4Zgzqj8&m=P44fY8KoR5YhZhzhsOkMxsibIMAUfhZHRDXnF3On2MxsIhoCUSbPBtL8pywGPjgH&s=IUXYrsnEsCA8Atw9gpoW_LOOBKMDDVKqFjEM6_da_kQ&e=)

**Evaluate variables relevant to the design of a cloud solution that meets business requirements**

<https://www.f5.com/resources/white-papers/big-ip-cloud-edition-solution-guide>

**Enumerate the available permutations and combinations of F5 virtualization technologies**

**Recognize the constraints imposed by various SDN technologies on F5 components**

[https://support.f5.com/csp/article/K43473164 [support.f5.com]](https://urldefense.proofpoint.com/v2/url?u=https-3A__support.f5.com_csp_article_K43473164&d=DwMFaQ&c=cehHn3YFTvbeqmBOizlVwndgdnPducYBouAyYX7fXYg&r=jUeFPfqgzrx_OsOhM0zDEUfWI3kGpoRpEOmb0DRdZBsCd_FxCUG3hd_qK4Zgzqj8&m=P44fY8KoR5YhZhzhsOkMxsibIMAUfhZHRDXnF3On2MxsIhoCUSbPBtL8pywGPjgH&s=DZW9gJBut236mpC0o61030UpMXnZtnlLrRhQFwPLG6Q&e=)

**Relate technical requirements to F5 platforms and virtualization techniques**

**Evaluate variables relevant to architecting solutions using single and multi-tier F5 products in various cloud environments**

[https://clouddocs.f5.com/api/iapps/AppSvcsiApp\_userguide\_module4\_lab1.html [clouddocs.f5.com]](https://urldefense.proofpoint.com/v2/url?u=https-3A__clouddocs.f5.com_api_iapps_AppSvcsiApp-5Fuserguide-5Fmodule4-5Flab1.html&d=DwMFaQ&c=cehHn3YFTvbeqmBOizlVwndgdnPducYBouAyYX7fXYg&r=jUeFPfqgzrx_OsOhM0zDEUfWI3kGpoRpEOmb0DRdZBsCd_FxCUG3hd_qK4Zgzqj8&m=P44fY8KoR5YhZhzhsOkMxsibIMAUfhZHRDXnF3On2MxsIhoCUSbPBtL8pywGPjgH&s=6Fl3SMn1k_BaCgUQcgz7Yg6ukTrLC71WLJaIYGTbGv0&e=)

**Evaluate the variables relevant to the design of green-field data centers and application delivery architectures to function as a cloud service provider**

[https://techdocs.f5.com/en-us/bigiq-8-0-0/big-iq-sizing-guidelines/big-iq-sizing-guidelines.html#big-iq-sizing-guidelines [techdocs.f5.com]](https://urldefense.proofpoint.com/v2/url?u=https-3A__techdocs.f5.com_en-2Dus_bigiq-2D8-2D0-2D0_big-2Diq-2Dsizing-2Dguidelines_big-2Diq-2Dsizing-2Dguidelines.html-23big-2Diq-2Dsizing-2Dguidelines&d=DwMFaQ&c=cehHn3YFTvbeqmBOizlVwndgdnPducYBouAyYX7fXYg&r=jUeFPfqgzrx_OsOhM0zDEUfWI3kGpoRpEOmb0DRdZBsCd_FxCUG3hd_qK4Zgzqj8&m=P44fY8KoR5YhZhzhsOkMxsibIMAUfhZHRDXnF3On2MxsIhoCUSbPBtL8pywGPjgH&s=5RB9OmYxx819OoUn7t0AWgxmPO_L6HiJU_cu2urjSfs&e=)

[https://techdocs.f5.com/en-us/bigiq-8-0-0/big-iq-sizing-guidelines/ch-biq-web-app-sec-sizing/big-iq-waf-sizing-limits.html [techdocs.f5.com]](https://techdocs.f5.com/en-us/bigiq-8-0-0/big-iq-sizing-guidelines/ch-biq-web-app-sec-sizing/big-iq-waf-sizing-limits.html%20%5btechdocs.f5.com%5d)

**Apply key concepts related to the design on-demand provisioning of application services**

**Evaluate variables relevant to the design of on-demand provisioning of application services**

# Section 3: Cloud Migration

**Evaluate variables relevant to the creation and validation of a Cloud migration plan for applications**

<https://aws.amazon.com/blogs/enterprise-strategy/6-strategies-for-migrating-applications-to-the-cloud/>

**Apply key concepts required for the implementation of a Cloud migration plan for applications**

**Evaluate variables relevant to the implementation of a cloud migration plan for applications**

**Apply key concepts required to leverage technologies to integrate with various SDN environments**

**Evaluate variables relevant to the leveraging of technologies to integrate with various SDN environments**

# [https://www.f5.com/pdf/solution-profiles/sdn-services-cloud-architecture-solution-profile.pdf [f5.com]](https://urldefense.proofpoint.com/v2/url?u=https-3A__www.f5.com_pdf_solution-2Dprofiles_sdn-2Dservices-2Dcloud-2Darchitecture-2Dsolution-2Dprofile.pdf&d=DwMFaQ&c=cehHn3YFTvbeqmBOizlVwndgdnPducYBouAyYX7fXYg&r=jUeFPfqgzrx_OsOhM0zDEUfWI3kGpoRpEOmb0DRdZBsCd_FxCUG3hd_qK4Zgzqj8&m=P44fY8KoR5YhZhzhsOkMxsibIMAUfhZHRDXnF3On2MxsIhoCUSbPBtL8pywGPjgH&s=K4eqsyC8neKE4Z7QeRCRBQHxhbUoeeEw8fJfclXwtVA&e=)

# Section 4: Cloud Deployment

**Analyze cloud service provider instance sizing and location as it relates to BIG-IP requirements**

<https://clouddocs.f5.com/cloud/public/v1/aws/AWS_download.html>

**Apply the key concepts required to deploy F5 instances on a cloud infrastructure**

<https://clouddocs.f5.com/cloud/public/v1/aws_index.html>

<https://clouddocs.f5.com/cloud/public/v1/matrix.html>

[https://clouddocs.f5.com/cloud/public/v1/shared/cloudinit.html [clouddocs.f5.com]](https://urldefense.proofpoint.com/v2/url?u=https-3A__clouddocs.f5.com_cloud_public_v1_shared_cloudinit.html&d=DwMFaQ&c=cehHn3YFTvbeqmBOizlVwndgdnPducYBouAyYX7fXYg&r=jUeFPfqgzrx_OsOhM0zDEUfWI3kGpoRpEOmb0DRdZBsCd_FxCUG3hd_qK4Zgzqj8&m=P44fY8KoR5YhZhzhsOkMxsibIMAUfhZHRDXnF3On2MxsIhoCUSbPBtL8pywGPjgH&s=uNESFwdcbVNCF-ZMDJxByDU7mRDS-L2dyZ7_7nTeCCU&e=)

# Section 5: Cloud Orchestration and Automation

**Apply the N/E/S/W-bound API model in order to orchestrate service creation**

<https://community.f5.com/t5/technical-articles/wils-the-data-center-api-compass-rose/ta-p/283999>

[https://www.f5.com/company/blog/networking-in-the-age-of-containers [f5.com]](https://urldefense.proofpoint.com/v2/url?u=https-3A__www.f5.com_company_blog_networking-2Din-2Dthe-2Dage-2Dof-2Dcontainers&d=DwMFaQ&c=cehHn3YFTvbeqmBOizlVwndgdnPducYBouAyYX7fXYg&r=jUeFPfqgzrx_OsOhM0zDEUfWI3kGpoRpEOmb0DRdZBsCd_FxCUG3hd_qK4Zgzqj8&m=P44fY8KoR5YhZhzhsOkMxsibIMAUfhZHRDXnF3On2MxsIhoCUSbPBtL8pywGPjgH&s=7U_38-zZenNZP-80b9yP1rsb35hw4JwVuvAxhO-CHaI&e=)

**Apply the key concepts required to automate and orchestrate using F5 RESTful APIs**

<https://f5-automation-labs-jt.readthedocs.io/en/latest/module1/lab7.html>

<https://clouddocs.f5.com/api/icontrol-soap/Authentication_with_the_F5_REST_API.html>

<https://clouddocs.f5.com/api/icontrol-rest/>

**Evaluate the variables relevant to automation and orchestration using F5 RESTful APIs**

<https://cdn.f5.com/websites/devcentral.f5.com/downloads/icontrol-rest-api-user-guide-14-1-0.pdf>

<https://clouddocs.f5.com/products/extensions/f5-appsvcs-extension/latest/userguide/http-methods.html>

**Apply the key concepts required to design a cloud bursting solution**

<https://www.f5.com/services/resources/white-papers/the-f5-cloud-bursting-reference-architecture>

**Evaluate the variables relevant to design a cloud bursting solution**

<https://community.f5.com/t5/technical-articles/cloud-bursting-what-you-need-to-know/ta-p/274685>

<https://community.f5.com/t5/technical-articles/cloud-bursting-the-hybrid-cloud-and-why-cloud-agnostic-load/ta-p/276565>

**Determine how to utilize cloud deployment templates to create on demand provisioning of application services**

<https://clouddocs.f5.com/cloud/public/v1/aws_index.html>

<https://clouddocs.f5.com/cloud/public/v1/azure_index.html>

**Evaluate cloud deployment templates for the creation of on-demand provisioning of application services**

**Apply the key concepts required to create a workflow for dynamic provisioning of an F5 instance**

# Additional Information

<https://www.f5.com/pdf/products/application-services-proxy-datasheet.pdf>

<https://www.geeksforgeeks.org/cloud-bursting-vs-cloud-scaling/>

<https://clouddocs.f5.com/containers/latest/userguide/config-map.html>

<https://clouddocs.f5.com/containers/latest/userguide/what-is.html>